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Seed • Farm • Garden

CATALOG

J. MANNS & CO.
1887 53d YEAR 1940
BALTIMORE, MD.

MANNS' SUPERIOR SEEDS

Continuously Successful Since 1887

Eight Reasons Why Thousands of Market Gardeners Prefer Manns' Seeds

1—They are specially selected from the world's best strains.

2—Manns' seeds are carefully rogued to maintain the high standard of perfection demanded by commercial growers.

3—The most modern methods are used to make vitality tests.

4—Because of our long years of practical experience under the original management, capable personnel and advantageous location, our prices are low.

5—Manns' trial grounds, maintained for your protection, are operated under strict personal supervision.

6—Manns' organization is familiar with the growing conditions and market requirements of the vegetable-growing centers throughout the East.

7—For more than half a century, Manns' seeds, scientifically selected, have been recognized by successful commercial growers for their high quality.

8—Greater profits have been consistently realized by sowing Manns' superior seeds.

Our Entire Business Has Always Been the Selection and Sale of Seeds, Bulbs, Plants, Farm and Garden Supplies. Our Success Has Been Based on the Quality of These Products.

Phone Plaza 1460 ***Suburban Delivery***

Prompt, Courteous, and Intelligent Attention Always

MAIL ORDERS: We pay Parcel Post or Express Charges on all vegetable and flower seeds, except Beans, Corn, Peas, and Seed Potatoes. This enables distant customers to use Manns' Superior Seeds at no additional expense.

PLEASE READ—Non-Warranty

It is very evident to anyone who gives the matter the slightest thought that it is to our best interests to send out only such stock as will grow and prove true to name and description. There are, however, so many contingencies to be encountered, entirely beyond our control, such as the weather, soil and other conditions that:

J. Manns & Company give no warranty, express or implied, as to description, quality, productiveness, or any other matter of any Seeds, Plants or Bulbs sent out, and will not be in any way responsible for the crop.

Domestic Parcel Post Rates Within the U. S. and Possessions		For First Pound	For Ea. Addit'l Pound
First Zone within	50 miles	$0.08	$0.01
Second Zone within	50 to 150 miles	.08	.01
Third Zone within	150 to 300 miles	.09	.02
Fourth Zone within	300 to 600 miles	.10	.04
Fifth Zone within	600 to 1000 miles	.11	.05
Sixth Zone within	1000 to 1400 miles	.12	.07
Seventh Zone within	1400 to 1800 miles	.14	.09
Eighth Zone over	1800 miles	.15	.11

All Prices Quoted Subject to Change

Telephone
Plaza 1460

Quality of Strains Proven
at Our Trial Grounds

ORDER SHEET

Established 1887

J. MANNS & CO.

Superior Seeds

BALTIMORE, MD.

ENSOR AND FORREST STREETS AT BELAIR MARKET

HAVE YOU ALLOWED FOR POSTAGE ON MANUFACTURED ARTICLES?

Cotton bags 25¢ each

No charge for boxes or other packing

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J. MANNS & CO., give no warranty express or implied, as to description, quality, productiveness or any other matter, of any Seeds, Bulbs, Plants they sell, and will not be in any way responsible for the crop. If purchaser does not accept the goods on these terms, they are at once to be returned.

QUANTITY	ARTICLES	PRICE	
	Amount Carried Forward,		

WANTED—Names and addresses of your acquaintances who should receive our Annual Catalog, Price Lists, etc. We will appreciate your kindness and so will they.—Thank you.

NAMES	POST OFFICE	STATE

QUANTITY	ARTICLES	PRICE	
	Amount Brought Forward,		

• MANNS' 1940 CATALOG •

Keep it for ready reference. It contains valuable information and will help you solve many problems.

Flowers for Particular Purposes and for Various Growing Conditions—page 42.

• • •

Vegetable Crop Rotation and Intercropping—(chart below).

• • •

How and When to Plant Vegetables—page 2.

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Practical Directions for Cultivation of all Important Vegetables (see alphabetical listing of varieties).

• • •

Field Seed Varieties — When to Sow and Quantity per Acre—page 41.

Spray Chart—recommending the most efficient materials—page 62.

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Nutrient Elements Required by Plants—page 91.

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Acid or Alkaline Preferences of Various Flowers and Vegetables—page 91.

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Plant Hormones and Vitamins—page 94.

• • •

Maryland Agricultural Experiment Station Fertilizer Recommendations for Various Crops—page 92.

It's Convenient To Buy At Manns' ***Plenty of Free Parking Space***

Baltimore's Most Accessible Seed Store

Suggestions for Rotation and Intercropping of Vegetables

EARLY CROP	SECOND CROP
CRESS, ENDIVE, GREEN ONION, LETTUCE, MUSTARD, RADISH, SPINACH	No. 1 followed by 3rd crop of 3, 5, 12, 13, 15, 19, or 21.
	No. 8 followed by 3rd crop of 19, 21, or 26.
	2, 4, 7, 9, 10, 11, 17, 18, 20, 22, 23, or 24.
CABBAGE, CARROT, CAULIFLOWER	Followed by No. 1, 3, 8, 13, 15, 21, or 35.
PEAS, BEETS, KOHLRABI	Followed by No. 1, 3, 4, 5, 6, 7, 8, 9, 10, 13, 14, 15, 16, 20, 21, or 25.
BEANS (Stringless)	Followed by No. 3, 4, 6, 7, 8, 9, 12, 15, or 25.
CORN	Followed by No. 3, 6, 13, 15, 16, 19, 21, or 25.

EXAMPLE—First crop Lettuce, second crop No. 1, followed by 21 means 3 successive crops, Lettuce, Beans, Spinach.—See Key below.

INTERCROPPING

Scarlet Globe Radish with Parsnips, Carrots or Salsify to mark the rows.
Scarlet Globe Radish between rows of Beans or Peppers.
Onion Sets between rows of Cabbage.
Celery Plants between rows of Onions.
Lettuce Plants between rows of Cabbage.
Spinach, Radish, Turnip, Carrots between Cabbage rows.
Turnips broadcast in Corn before last working.
Quick growing Annuals in Asparagus beds.

KEY

1 Beans, Stringless	10 Cucumber	19 Radish
2 Lima Beans	11 Eggplant	20 Rutabaga
3 Beet	12 Endive	21 Spinach
4 Cabbage	13 Kale	22 Squash
5 Chinese Cabbage	14 Kohlrabi	23 Sweet Potatoes
6 Carrot	15 Lettuce	24 Tomato
7 Cauliflower	16 Mustard	25 Turnip
8 Corn (Sweet)	17 Pepper	26 Winter Onions
9 Celery	18 Pumpkin	

HOW AND WHEN TO PLANT VEGETABLES

Vegetables	Seeds or Plants to Provide For Family of Five	Date to Sow or Plant Outdoors		Depth to Cover Inches	Space Between Rows	Set Plants or Thin Out to Inches	Time Required to Produce Crop	Number of Running Feet of Row for Family of 5	Special Notes
		First	Last						
Asparagus	1 oz. or 50	Mar. 20	Aug. 1	Seeds 1 in. Plants 4 in.	3 to 4 ft.	12 in.	Seeds 4 years Plants 2 years	50 ft.	A well-cared for bed improves with age and lasts for many years.
Beans (Bush)	4 lbs.	April 20	Aug. 15	2 in.	2 ft.	3 to 4 in.	60 to 90 days	200 ft.	Select, early, midseason and late in both green and wax podded kinds.
Beans (Pole) (Limas, see below)	3 pkts.	May 5	Aug. 1	2 in.	3 to 4 ft.	3 ft. (hills)	90 to 120 days	80 to 100 hills	Select early and late, green and wax pod.
Beet	2 oz.	Mar. 20	Aug. 15	½ to 1 in.	18 in.	2 to 3 in.	60 to 80 days	80 ft.	Select early, midseason and late kinds for winter storage.
Borecole or Kale	1 pkt.	April 20	Sept. 1	⅛ in.	2½ ft.	12 in.	80 to 100 days	20 ft.	Sow during July for Fall use.
Broccoli	1 pkt.	April 5	Aug. 10	½ to 1 in.	2½ ft.	24 in.	120 days	20 ft.	Handle exactly like Cauliflower.
Brussels Sprouts	1 pkt. or 15	May 5		Seed ½ in.	2½ ft.	24 in.	120 days	20 ft.	The most delicate of all the cabbage tribe.
Cabbage	36	April 20	Sept. 15		2 to 3 ft.	18 to 24 in.	100 to 150 days	60 ft.	Set out 2 doz. early, 1 doz. midseason and 2 doz. late kinds.
Chinese Cabbage	1 pkt.	July 20		¼ in.	2½ ft.	12 in.	80 to 100 days	20 ft.	Sow only on August 1st for Fall use only.
Carrot	½ oz.	Mar. 20	Aug. 1	½ in.	1½ to 2 ft.	2 to 3 in.	45 to 60 days	40 ft.	Sow short rows often. Sow on August 1st for winter storage.
Cauliflower	24	April 5	July 10		2 to 3 ft.	2 ft.	120 to 150 days	20 ft.	Treat very much like Cabbage.
Celery	½ oz. or 60	Mar. 20		Seed ¼ in.	3 ft.	6 in.	100 to 120 days	60 ft.	Select an early and a late variety.
Corn (Sweet)	1 lb.	April 20	July 15	2 in.	3 ft.	12 in.	80 to 120 days	200 ft.	Sow in blocks of short rows, for perfect pollenization.
Cucumber	1 pkt.	April 20	Aug. 5	¾ in.	4 to 5 ft.	(3 to hill) 36 in.	60 to 80 days	10 hills	When picking, cut stems; do not pull vines.
Eggplant	12	May 20			2½ ft.	24 in.	100 to 120 days	20 ft.	Needs lots of heat and frequent hoeing.
Endive	1 pkt.	April 5	July 25	⅛ in.	2 ft.	12 in.	60 to 80 days	40 ft.	To bleach, tie plants into cone shape.
Kohl-Rabi	1 pkt.	April 5	Aug. 10	¼ to ½	1½ to 2 ft.	4 to 6 in.	60 to 80 days	60 ft.	Should be used when roots reach a diameter of 2½ in.
Leek	1 pkt.	Mar. 30		½ in.	2 ft.	4 in.	100 days	20 ft.	Grow like Onions and hill to bleach stalks.
Lettuce	2 oz. (4 kinds)	Mar. 20		¼ in.	1½ to 2 ft.	10 to 12 in.	45 to 60 days	150 ft.	Should be thinned out to stand a foot apart.
Lima Beans (Bush)	1 lb.	May 5	July 15	1 in.	2½ to 3 ft.	2 ft. (hills)	100 days	40 ft.	
Lima Beans (Pole)	2 pkts.	May 15	July 10	1 in.	3 ft.	3 ft. (hills)	120 days	20 hills	Select an early and a late variety in both classes.
Melons	1 pkt.	May 10		½ to 1 in.	4 ft.	4 ft. (hills)	100 to 120 days	10 hills	See note on Cucumbers.
Onions	1 oz.	Mar. 20		¼ to ½ in.	18 in.	3 or 4 in.	80 to 110 days	80 ft.	Weeding and hoeing are their chief requirements.
Onion Sets	1 qt.	Mar. 20			12 in.	2 in.	30 to 60 days	40 ft.	
Parsley	1 pkt.	Mar. 20	Aug. 10	¼ to ½	15 to 18 in.	4 in.	100 to 120 days	50 ft.	Seed requires 3 to 6 weeks to germinate.
Parsnips	1 pkt.	April 5	June 1	½ to 1 in.	15 to 18 in.	2 to 4 in.	150 days	50 ft.	Cultivate well during the growing season.
Peas	3 lbs.	Mar. 20	Aug. 10	2 in.	2½ ft.	1 in.	60 to 100 days	200 ft.	The early smooth seeded sorts may be sown a month before the later, wrinkled varieties.
Pepper	12	May 5	Aug. 20		3 ft.	2 ft.	100 days	20 ft.	See note on Eggplants.
Potatoes	15 lbs.	Mar. 20		4 in.	3 ft.	6 in.	100 days	200 ft.	Really a farm crop.
Pumpkin	1 pkt.	May 20	July 1	½ in.	4 to 6 ft.	4 ft. (hills)	100 to 120 days	12 hills	When storing, prevent bruising.
Radish	3 pkts.	Mar. 20	Sept. 15	½ in.	18 in.	1 to 4 in.	30 to 60 days	50 ft.	Spring sorts can be grown quite close. Summer and fall varieties require more space.
Rhubarb	6	Mar. 20	Oct. 1		3 ft.	3 ft.	60 days	20 ft.	Requires a lot of space and plenty of manure.
Rutabaga	1 pkt.	Mar. 20	July 20	⅛ in.	2 ft.	6 in.	90 to 100 days	40 ft.	Sow around August 1st for winter use.
Salsify	½ oz.	April 5	June 1	1 to 1½ in.	15 to 18 in.	2 to 4 in.	100 to 150 days	25 ft.	Can be stored for winter use or left in ground until spring.
Spinach	1 oz.	Mar. 20		½ in.	12 in.	2 to 4 in.	60 days	75 ft.	Plant short rows often.
Squash	1 pkt.	April 20		½ to 1 in.	4 to 6 ft.	4 ft. (hills)	100 to 120 days	12 hills	See note on Pumpkins.
Swiss Chard	½ oz.	Mar. 20	Aug. 10	½ to 1 in.	1½ to 2 ft.	6 in.	90 to 100 days	40 ft.	Treat like Beets.
Tomato	1 pkt. or 48	Seeds Feb. 18 indoors Plants May 5		Seed ½ in.	3 to 4 ft.	3 ft.	100 to 120 days	150 ft.	For best results train to stakes or trellis.
Turnips	1 pkt.	Mar. 20	July 1 Aug. 31	⅛ in.	15 to 20 in.	2 to 4 in.	60 to 80 days	60 ft.	Sow again in August for winter use.

In the vicinity of Baltimore many varieties are sown in hot-beds during February, March and April to be planted out about May 10th, or earlier in the case of some varieties where the plants may be hardened off.

Some vegetables, such as Cabbage, Lettuce and Spinach, are sown at varying dates, according to variety.

This chart, with dates changed to conform with weather conditions in the vicinity of Baltimore. is used with permission of the manufacturers of Planet Jr. Garden Tools.

Varieties of Special Merit

OUR general stocks are unexcelled in quality and better seeds cannot be purchased at any price. The following recently improved strains, however, are worthy of special consideration and should be grown by every progressive market gardener.

BEETS

MANNS' NEW MODEL—Has become a favorite with market gardeners supplying the most critical trade. A thoroughly established strain, dependable year after year for its uniform maturity, deep red color, freedom from light zones, and good bunching tops. New Model is no longer "new." It has been grown for nearly ten years in the vicinity of Baltimore, and each year our sales of it have increased over the previous year. We do not know any beet that will beat New Model as a main crop variety for this section. **¼ lb., 25c; lb., 85c; 10 lbs., $7.50.**

CABBAGE

CHIEFTAN SAVOY—Received the award of Merit, 1938 All- American selection. Produces well formed, medium sized firm heads, outstanding in uniformity and quality. Page 9.

CARROT

SUNRISE—A favorite with market garden trade because of its fine quality, perfect shape and attractive color. Specially valuable for medium and late use, an excellent keeper and thoroughly dependable. Oz., 15c; ¼ lb., 30c; lb., $1.00; 10 lbs., $8.50.

CAULIFLOWER

WHITE MOUNTAIN—Selected out of a series of trials as the most dependable uniform heading variety for the vicinity of Baltimore. Page 11.

CELERY

MANNS' GOLDEN (Special)—A more uniform strain of Golden Plume, has better hearts, is earlier and more easily blanched than other types. Strictly dependable for commercial production. **Oz., $1.00; ¼ lb., $3.50; lb., $12.50.**

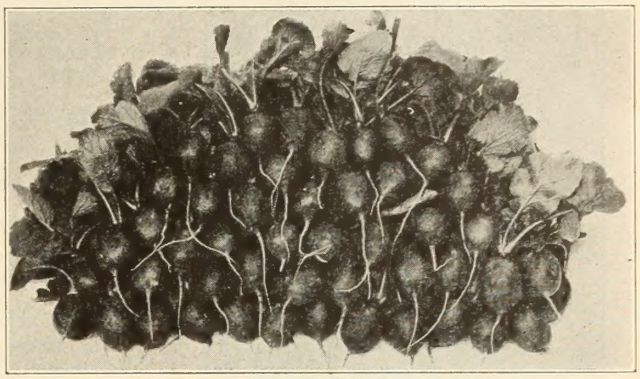
CORN

MANNS' EARLY SUPERIOR—This new variety is of remarkable size considering its earliness. The ears are 8 inches long and have 16 to 20 rows of rather narrow deep grains. The quality is excellent and the attractive appearance of the rich, tender, well-filled ears make it a very desirable sort for the Market Gardener. Qt., 35c; pk., $1.75; bu., $6.00.

MANNS' No. 56—The best, largest, most saleable early market corn we ever have known. It can be planted extremely early without danger of rotting, which makes it possible to produce marketable ears at least five weeks ahead of Stowell's Evergreen. Resembles sugar corn, an excellent shipper and a money maker. Qt., 50c; pk., $3.25; bu., $12.00.

LETTUCE

Four new money making strains, New York (Iceberg) types, all adapted to Eastern growing conditions; MANNS' SPECIAL No. 10, IMPERIAL No. 44, IMPERIAL No. 847 and COSBERG—see pages 20, 21.



RADISH

SCARLET GLOBE No. 8—So uniform in its maturity that each sowing can be entirely gathered and bunched at one pulling, with practically no waste. This means more bunches per row, more time saved in bunching, and the ground ready for the next crop a week earlier. **¼ lb., 25c; lb., 75c; 10 lbs., $6.00; 100 lbs., $50.00.**

RUTABAGA

NEW CANADIAN—Grown for a number of years in the North and held very closely by private individuals, the seed of this variety has always been extremely difficult to procure in a true and reliable type. After three years of searching and checking in our trial grounds, we have found the correct strain and offer it with every assurance that it will soon become the only Rutabaga grown in this section. Pkt., 10c; oz., 15c; ¼ lb., 40c; lb., $1.25.

TOMATOES

IMPROVED ADVANCE—An extra early, large tomato of high quality, round or slightly flattened shape, and exceptionally smooth for such an early variety. As early and hardy as Earliana and yielding more fruit both in the first and subsequent pickings. It is more shapely, more free from cracks and shows less green about the stem than other extra early sorts. With Improved Advance the grower can produce a crop which will stand superior in appearance and quality, in competition with the other extra earlies and command the fancy prices of an early market. **Oz., 50c; ¼ lb., $1.75; lb., $6.00.**

RUTGERS tomato has become so popular due to its quality and yield that it naturally has had wide distribution and publicity. It is very important however that seeds of this new variety be purchased from the most reliable sources, as some stocks have been grown more carefully than others and preservation of the original qualitites has been an expensive item in its reproduction. Manns' stock of Rutger's is not only certified but has been produced from stock seed which we have proven to be superior to two other certified stocks. **Oz., 40c; ¼ lb., $1.25; lb., $4.00.**

ASPARAGUS

1 ounce to 60 feet of drill; 1 pound per acre; 3,000 plants per acre.

Sow in spring in drills about eighteen inches apart and two inches deep in light, rich soil, planting fifteen to twenty seed to each foot of row. Thin to about one inch apart and give frequent and thorough cultivation during the summer.

Set the plants about four inches deep and one to two feet apart in rows four to six feet apart. After the plants are well started, give frequent and thorough cultivation. The next season the bed may be cut over two or three times. After the final cutting, give a good dressing of manure, ashes and salt.

MARY WASHINGTON—Resistant to disease, large, early and produces remarkably tender dark green stalks with very compact purplish green tips. **Pkt., 10c; 2 ozs., 15c; ¼ lb., 25c; lb., 75c.**

PARADISE—New early, extremely strong, vigorous producer, rust resistant. **Pkt., 10c; oz., 50c; ¼ lb., $1.50; lb., $5.00.**

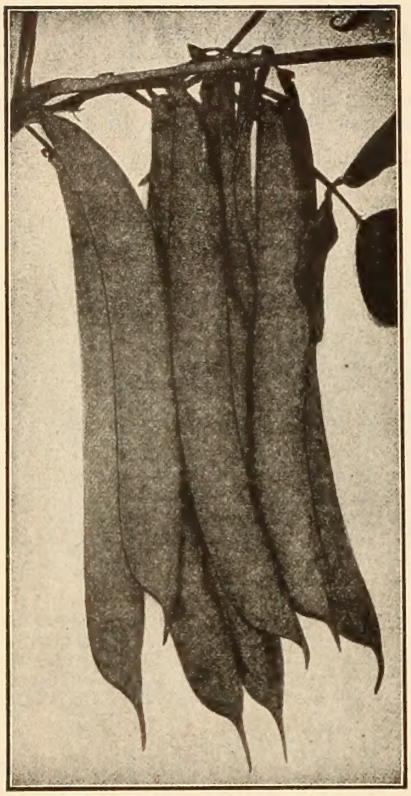
ASPARAGUS ROOTS

From one to two years may be saved by planting Asparagus roots instead of seed. Choice, 2-year-old roots, all leading varieties. $1.25 per 100; $8.00 per 1,000. MARY WASHINGTON, $1.25 per 100; $8.50 per 1,000.

ARTICHOKE

LARGE GREEN GLOBE—About 500 plants from 1 ounce. The scale-like leaves of the flower heads are used as a salad or boiled, making a delicious dish which is very popular with the French and Italians. **Pkt., 10c; oz., 50c; ¼ lb., $1.50; lb., $5.00.**

JERUSALEM OR TUBEROUS ROOTED—Grown exclusively for their large potato-like roots which are valuable for feeding hogs. Price, ¼ pk., 45c; pk., $1.25; bu., $4.00. Expressage extra.



Burpee's Stringless Improved

BUSH BEANS

1 pint to 100 feet of drill; 1 to 1½ bushels per acre.

Beans are tender and should not be planted until the soil is well warmed. Sowing too early will often result in a poor stand and uneven ripening. Sow the seed 1½ to 2 inches deep in rows not less than 18 inches apart and firm the soil to assist germination. Allow the plants to stand 4 to 10 inches apart in the row according to variety.

Shallow cultivating and hoeing should be done frequently until the vines are in blossom. To prevent blight do not cultivate deeply and avoid working them while the vines are wet. Beans grow best in a warm, well-drained, sandy loam. For succession plant every two weeks until about August 15th.

ROUND GREEN PODDED VARIETIES

Asgrow (Stringless Black Valentine.) Fully as early as the regular stringy Black Valentine but producing exceptionally long, oval or nearly round pods. Extremely prolific, entirely stringless, and of highest quality.

Black Valentine Stringless (Round Pod)—Produces strictly round, stringless pods. Not as early nor as prolific as the oval type and will not stand planting as early. Its real utility lies in the slenderness of its pods for canning.

Burpee's Stringless Green Pod (Improved) Very popular and can be profitably grown by either trucker or home gardener. It combines vigor, earliness and productiveness. The pods are produced in abundance and are handsome in appearance, being rich dark green in color, smooth, absolutely round, meaty, stringless, free from fiber, and of exceptionally delicate quality. Mature for picking condition in 45 days.

New Stringless Green Pod This new highly productive strain has many Full Measure characteristics bred into it. Its prolific nature, season of growth, length, roundness of pods and appearance, are definitely inherited and yet to these very desirable features has been added a wonderful degree of hardiness which helps New Stringless withstand adverse weather conditions better than its parent stock.

Giant Stringless Green Pod A very productive long, round-podded variety, longer and straighter than Burpee's Stringless.

Dwarf Horticultural or Dwarf Cherry One of the best dwarf sorts for green shell beans for the home garden and market and can be used early as a snap bean. As a green shelled bean it is equal to the lima in quality while any surplus crop can be kept for winter use. The pods are 5 inches long, stout, flat and stringless. They are green at first changing as they mature to yellow splashed with carmine. The dried seeds are large, almost round, light buff spotted with dark red. Our special stock of this variety is superior to the old style Dwarf Cherry, being entirely stringless and free from runners.

Streamliner An oval-flat green podded stringless bean, not as flat as Bountiful and growing about 1 to 1½ inches longer. Matures in 50 days and outyielded Bountiful in all tests. Seed white.

Full Measure Stringless A second early, round-podded, stringless bean of recent introduction. The pods are straight, meaty, and are dark green in color. They are entirely stringless and measure 6 to 8 inches in length. Very prolific.

FLAT PODDED GREEN STRINGLESS

Bountiful Extra early, green pod, good cropper, hardy, prolific; pods long, straight, thick-flat, entirely stringless, good quality. The best extra early, semi-round variety.

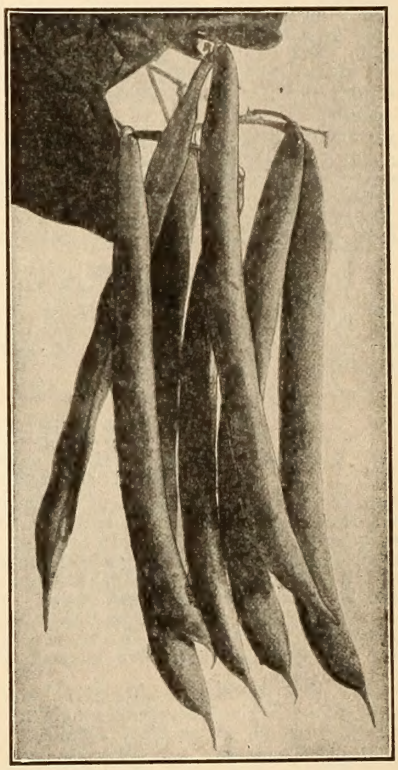
Plentiful (50 Days)—An improved Bountiful, with longer, thicker, darker green pods. Two or three days later than Bountiful but much more prolific and resistant to two of the most troublesome forms of rust; an All-American Winner. We offer the originator's stock.

PRICES

GREEN PODDED VARIETIES	Pt.	Qt.	Pk.
Asgrow—Black Valentine, Stringless, Oval	$ .20	$ .35	$2.00
Black Valentine, Stringless, Round	.20	.35	2.00
Bountiful	.20	.35	2.00
Burpee's Stringless Green Pod	.20	.35	2.00
Dwarf Horticultural or Dwarf Cherry	.20	.35	2.00
Full Measure Stringless	.20	.35	2.00
Giant Stringless Pod	.20	.35	2.00
New Stringless Green Pod or Tendergreen	.20	.35	2.00
Plentiful	.20	.40	2.50
Streamliner	.25	.50	3.50

Let us quote bushel or bag lots—state variety and quantity

Increased yields result from Nitragin Inoculation



Full Measure

Block of Selected Pedigreed Stock Seed on Idaho Breeding Farm

WAX BEANS

Sure Crop Wax Decidedly better quality than Currie's Rust Proof but vine and seed very similar in appearance, and maturing about a week later. The pods are of a rich yellow color, growing an inch longer than Currie's and stringless at all stages of growth. The disease resistant qualities found in Currie's are duplicated in this variety and it is vigorous, hardy, and very productive. For quality use Sure Crop, while for earliness Currie's is better.

Currie's Rust Proof Wax This variety is not stringless, but being the earliest, hardiest and one of the most prolific of all flat wax-podded beans, has become a favorite among market gardeners and truckers. It is ready for picking in 42 days and the large, flat, straight pods which are of a bright golden yellow color make an attractive appearance when offered for sale. The vines are strong and upright, holding the pods well off the ground, their vigorous and hardy nature making them immune from rust, mildew or blight.

Round Pod Kidney Wax (Brittle Wax.) An excellent early round-podded variety of handsome appearance. Pods are long, straight, brittle, meaty; entirely stringless and of exceptionally desirable quality. The best round-podded wax bean for the home garden.

Burpees New Kidney Wax Resembles Wardwell's Kidney Wax, excepting that the pod is larger and thicker, though not so broad. Fairly productive and of high quality, stringless, very fleshy and brittle. Pods measure 6 inches and are of attractive, clear yellow color. Mid-season sort; not damaged by wet weather.

BUSH BEANS

VARIETIES USED AS SHELL BEANS

Dwarf Horticultural, Fordhook Favorite, and Davis' White Kidney Wax. Three very satisfactory shell bean sorts have been listed previously.

White Marrowfat This is a very prolific variety and has become a choice family sort both for green shells and dry beans. Pods are broad, about 5½ inches long, medium green changing to yellow, having large, clear, white seeds which cook very dry and mealy.

Royal Dwarf or White Kidney Excellent late variety, green, shelled or dry. Seeds are large, white, kidney shaped, and of fine quality.

Erfurt Special (New) If you grow Italian varieties of FAVA, BROAD BEANS, ERFURT BEANS, be sure to grow Erfurt Special this year in preference to any other variety. It is much earlier, extremely large and of excellent quality.

Broad Erfurt Of foreign origin and entirely different from any other variety, being larger than the ordinary lima, with much darker pods. This sort will prove profitable for market gardeners who have Italian and Spanish trade.

POLE BEANS

EDIBLE PODDED

For Cultural Directions See Pole Limas.

Burger's Stringless Green Pod or White Kentucky Wonder Bears large, brittle, stringless pods of excellent flavor, dark green in color. It resembles the Kentucky Wonder in form of pod but is much earlier, more productive and bears longer. Seeds white, fine for baking.

Kentucky Wonder or Old Homestead This old standard variety is extremely productive and of finest quality. It is early and produces round, green pods about 9 inches long. Splendid for use as snaps for the home gardener as it continues to bear for a long period. Seed light brown.

Horticultural Cranberry or Wren's Egg An old favorite, excellent both as a snap and shell bean. Medium early, producing large quantities of 5 and 6-inch pods which are broad, thick, and of fine flavor.

Lazy Wife One of the best general purpose pole beans; of superior quality as a snap, green shelled or dried bean. Pods, which are borne abundantly throughout the summer, are very easily gathered and entirely stringless, brittle, light green in color and of a mild, sweet flavor. Seed pure white, 6 to 8 in each pod.

Yard Long, Celestial or Asparagus Bean Somewhat of a curiosity and yet possessing excellent qualities. It is very prolific, absolutely rust proof and a rank grower. It will produce pods 18 to 24 and sometimes 30 inches long. An excellent table vegetable, the pods being tender, stringless and of a rich asparagus flavor.

PRICES

WAX VARIETIES	Pt.	Qt.	Pk.	Bu.
Burpee's New Kidney Wax	$ .20	$ .35	$2.00	$7.00
Curries' Rust Proof Wax	.20	.35	2.00	7.00
Davis' White Kidney Wax	.20	.35	2.00	7.00
Pencil Pod Black Wax	.20	.35	2.00	7.00
Round Pod Kidney Wax	.20	.35	2.00	7.00
Sure Crop Wax	.20	.35	2.00	7.00
Unrivalled Wax	.20	.35	2.00	7.00
POLE BEANS				
Burger's Stringless or White Kentucky Wonder	.20	.35	2.00	7.00
Horticultural Cranberry	.20	.35	2.00	7.00
Kentucky Wonder	.20	.35	2.00	7.00
Lazy Wife	.20	.35	2.00	7.00
	Oz.	Lb.		
Yard Long, Celestial	$0.10	$1.00		
BUSH BEANS				
Erfurt Special		.40	2.50	9.00
Broad Erfurt		.40	2.50	9.00
White Kidney		.35	2.00	7.50
White Marrowfat		.35	2.00	7.50

POLE LIMA BEANS

1 quart to 150 hills; 8 to 10 quarts per acre.

Pole beans do not bear as early as the bush varieties but they are more productive, their bearing season is longer and they are more easily gathered. They succeed best in a warm sandy loam which has been enriched with well rotted manure. If poles are used they should be set three to four feet apart each way. After the ground has become warm and dry, plant 4 to 6 beans to a pole and when well started thin out to 2 or 3 plants to a pole. By placing the seed eyes down they will germinate more quickly and for this reason are less liable to rot. Cultivate frequently but shallow.

Early Leviathan The Early Leviathan stands supreme because of its combined qualities, earliness, size and productiveness. The large, well filled pods are borne in clusters of five to ten and are spaced over the entire vine. They are well filled with large fleshy beans of excellent quality, delicate pale green in color.

Carpinteria A very desirable pole lima for the home and market garden, producing an abundance of large four-seeded medium green pods. The color is distinctive in having a decided greenish tint, an indication of very finest quality. The beans are thin skinned, delicious flavor and retain the distinctly green tinge even when dried.

Ideal One of the largest and most valuable of the medium late varieties, producing a tremendous crop of seven-inch pods, which are filled with five to six large beans of excellent quality. Seed large, ovid, flat white with slight greenish tinge. Splendid for market gardeners.

King of the Garden This is the best and most popular main crop variety. Vines are strong and vigorous; setting pods early and continuing to bear until frost. Is used extensively by market gardeners because of its very prolific nature and the immense size of the pods, which are very straight and handsome; of medium dark green color, broad, flat and filled with four or five large white beans of finest quality.

Challenger or Dreer's Pole Vigorous, productive, and quite early, producing pods which are much thicker than any other sort and filled with four thick beans so closely set that the ends are flattened. A favorite among market gardeners.

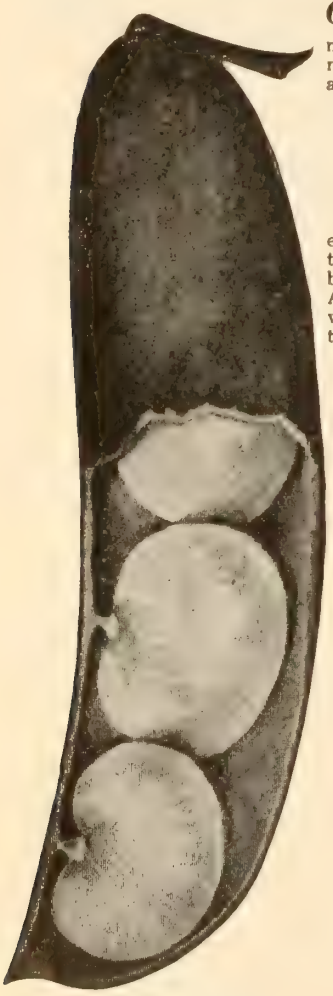
Early Leviathan

Giant Podded The largest podded lima in cultivation; extremely vigorous in growth, mid-season. Pods are borne in clusters of 6 to 8 and measure 7 inches long and 1½ inches broad. The beans are extra large and of excellent quality.

BUSH LIMA BEANS

Large seeded sorts, 1 qt. to 100 hills; 1 bu. to the acre.
Small seeded sorts, 1 qt. to 150 hills; 3 pks. to the acre.

These varieties require no support, are about two weeks earlier than the pole beans, and can be planted closer in the rows. They are therefore used by large growers and by gardeners who do not find it convenient to use poles. After danger of frost is past and the ground has become warm, plant in 3 foot rows dropping 3 seeds to a hill and the hills 15 inches apart.



Early Giant Bush

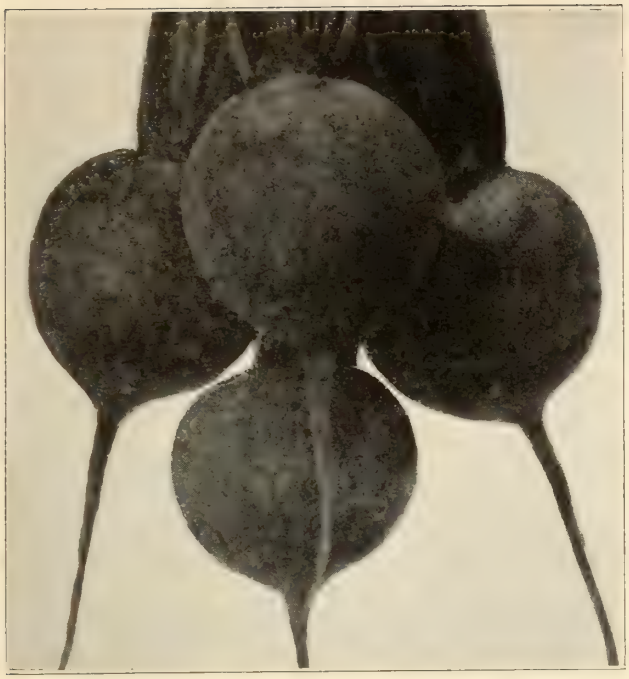
Early Giant Bush Lima The largest and earliest bush lima; two weeks earlier than Fordhook, very prolific and of excellent quality. Pods contain 4 to 5 large, close setting beans, and are borne in clusters of 5 to 8. Plant very vigorous and upright, often attaining a height of 30 inches.

Fordhook Bush Lima A most excellent variety and exceedingly popular with market gardeners. The plants are freely branching and very erect in their growth. Four or five large, very thick beans are contained in each pod and the plants continue to produce large quantities from July until frost. The green beans even when full size are tender, juicy and sweet when cooked.

Burpee's Improved Bush Lima A very prolific mid-season variety of very hardy, vigorous and true bush growth, bearing clusters of 5 to 8 pods measuring 5 to 6 inches long. The pods are borne abundantly, enormous in size and well filled with handsome beans which are both larger and thicker than those of the regular Burpee's Bush Lima.

Wood's Prolific or Henderson's Improved Bush Lima A very early and vigorous type, producing an abundance of 3 to 4-inch pods; contain 4 small, flat, white beans of good quality.

BUSH LIMAS PRICES	Pt.	Qt.	Pk.	Bu.
Burpee's Improved Bush Lima	$ .25	$ .45	$2.75	$ 8.50
Early Giant Bush Lima	.30	.50	3.00	10.00
Fordhook Bush Lima	.30	.50	3.00	11.00
Wood's Prolific or Henderson's Improved Bush Lima	.25	.50	3.00	10.00
POLE LIMAS				
Burpee's Best	.30	.50	3.00	10.00
Carpinteria	.25	.45	2.75	9.00
Challenger or Dreer's Pole	.30	.50	3.00	10.00
Early Leviathan	.25	.45	2.75	9.00
Giant Podded Pole	.25	.50	3.00	10.00
Ideal	.25	.45	2.75	8.50
King of the Garden	.25	.45	2.75	8.50



Manns' New Ruby Gem

Manns' New Ruby Gem Is a beet of genuine quality and real beauty. As early as Crosbys Egyptian, extremely dark red and not a purple or brown root in the lot. The most critical produce buyer will be pleased with its intense color, perfect shape and freedom from zones. It has plenty of tops for bunching and while it is also an excellent canners variety it should not be confused with the various "all purpose" sorts developed mainly for packing house purposes.

BEETS—MANGEL (OR STOCK)

Sow 1 ounce to 100 feet of drill, 6 pounds to the acre in drills and 15 to 20 pounds to the acre is sown broadcast.

Mammoth Long Red Attains enormous size, producing thirty to fifty tons per acre. The roots are straight, well formed and much thicker than other sorts. Grows well above the ground and is therefore easily gathered. The flesh is white tinged with rose. Highest feeding qualities.

PRICES

BEETS	Pkt.	¼ Lb.	Lb.	10 Lbs.
Crimson Globe	$ .10	$ .25	$ .75	$6.50
Crosby's Egyptian—Dark	.10	.25	.75	6.50
Crosby's Egyptian—Light	.10	.25	.75	6.50
Detroit Dark Red	.10	.25	.75	6.50
Early Wonder (special)	.10	.25	.75	6.50
Edmand's Blood Turnip	.10	.25	.75	6.50
Extra Early Flat Egyptian	.10	.25	.75	6.50
Half Long Blood Red	.10	.25	.75	6.50
Lentz (Ex. Early Light Red)	.10	.25	.75	6.50
Little Egypt	.10	.30	1.00	8.50
Lutz Green Leaf (Dark Red)	.10	.25	.75	6.50
Mammoth Long Red	.10	.15	.50	4.00
Manns Early Spring	.10	.35	1.00	8.50
New Model	.10	.25	.85	7.50
Nutting's Gem	.10	.25	.75	6.50
Perfected Detroit	.10	.25	.75	6.50
Ruby Gem	.10	.30	1.00	8.50

TABLE BEETS

1 ounce to 50 feet of drill; 5 pounds per acre.

The soil for beets should be light, rich, fine and deeply cultivated. Smooth beets cannot be grown if fresh manure is used. If wanted very early, sow in hot beds and transplant, cutting off the outer leaves. For early outdoor crop plant the seeds about 1 inch apart and 1 inch deep in rows 1 to 2 feet apart, firming the soil about the seeds by walking on the row. This should be done as soon as the ground can be worked and for table use, plantings should be made every three weeks. Thin out the plants to 3 inches apart. For main crop sow in the early part of May while for winter use they may be planted up to July 1st.

MANNS' BEET SEED

is grown from transplanted roots which have been carefully selected as to both interior and exterior color, tops, shape and uniformity of size. It could be grown much cheaper if we were supplying our trade just ordinary commercial beet seed. Superior seeds can only be grown from specially selected parent stocks.

New Model Perfect in shape and of a beautiful red color, very uniform in shape and size, the entire crop maturing during the same week. Forces well under glass. This variety fills a definite need among the market gardeners and has met with success. Practical growers realizing the superior quality of this strain are ordering in 25, 50 and 100-pound lots, using this one variety throughout the entire season.

Crosby's Egyptian Smooth, globe shaped, deep red in color, tender, sweet and richly palatable when served. This should not be confused with Flat Egyptian as it is similar only in point of earliness.

Detroit Dark Red Careful comparison with other prominent strains of this variety show that our stock is unsurpassed in quality and appearance. The tops are small and upright in growth and the roots are globular, of medium size, very smooth and of a wonderful dark red color throughout. Very desirable for canning.

Early Wonder Popular bunching variety in some sections where a light-colored beet is desired, and white zones are not objectionable.

Extra Early Flat Egyptian One of the very earliest, excellent for forcing and early crop. Roots are distinctly flat, very dark red, have very small tap root and are of fine quality when young. They measure 2 inches in diameter when mature and have very small tops.

Half Long Lentz Bright red outside, flesh pale pinkish white, sweet, about 2½ by about 4 inches top shaped.

Half Long Red or Lutz Green Leaf Five to six inches long, 2½ to 3½ inches diameter at shoulder, half long, top shaped, dark maroon red, flesh deep blood red.

Little Egypt Earlier, darker and more uniform than Extra Early Flat Egyptian, absolutely free from zoning, specially adapted for forcing, having short tops.

Manns' Early Spring Being extremely early, of a wonderful dark red color, and of exceptional quality, Manns' Early Spring Beet offers an unusual opportunity for profitable production.

True globe shaped, dark red smooth roots, with no light zones, ample tops for bunching. Ready for market just a few days later than Extra Early Flat Egyptian, yet possesses the advantages of being shaped like Detroit Dark Red.

Selected Heads of Golden Acre for Stock Seed Production

CABBAGE

1 oz. for 2,000 plants; ¼ lb. per acre.

Yellows Resistant Varieties marked *

CULTURE.—The best results are obtained from a well-drained, deep rich loam. The very early varieties should be sown about September 15th and in 4 or 5 weeks transplanted to coldframes, from which they are transplanted to open ground from March 15 to April 15. If this is not done the seed should be sown in hotbeds in February; making plantings later of course according to variety and time crop is wanted. The earliest sorts should be set out in rows 2 feet apart and 18 inches apart in the rows.

If it is not especially desired to have early cabbage the seed may be sown in open ground and transplanted after 4 weeks. For second early crops sow in April and transplant in May; these will mature in July and August. The later varieties should be planted in May and transplanted in July to rows 3 feet apart and 2 feet apart in the rows; these will mature from September to November.

FIRST EARLY SORTS

Extra Early Express Earlier than Jersey Wakefield, smaller and less compact, but often a very profitable crop.

New Selected Jersey Wakefield An improved strain of Early Jersey Wakefield, grown and selected with the greatest care; there is none better. Plant compact and erect or very slightly spreading, with few outer leaves, which are smooth, thick, nearly oval and light green. Stem short. Heads of medium size, very solid, uniformly pointed and of excellent quality.

Manns' Superior Jersey As early as Selected Jersey Wakefield but produces much larger heads. Uniformly sure head strain.

****Jersey Queen*** The yellows resistant Jersey Wakefield.

Charleston or Large Wakefield Produces larger and less pointed heads than Jersey and a week or two later in maturity.

Golden Acre Matures earlier than Jersey Wakefield, forming a large round, solid head resembling Copenhagen Market; very uniform, and compact, having few outer leaves which permits close planting. Golden Acre commands very high prices.

Copenhagen Market This very fine, large round headed variety is of Danish origin and has proven to be very valuable to the American grower. It is nearly as early as Jersey Wakefield. The heads average about 10 pounds, and the stems are very short.

****Marion Market*** Yellows resistant Copenhagen.

New Leader Very early flat heading sort forming small solid heads, very early but developing larger heads if allowed to stand.

Glory of Enkhuizen Large sure heading, dark green variety, globular, very hard and solid, few outer leaves, excellent quality

PRICES

Variety	Pkt.	Oz.	¼ Lb.	Lb.
Charleston or Large Wakefield	$ .10	$ .20	$ .60	$2.00
Copenhagen Market	.10	.25	.75	2.50
Extra Early Express	.10	.20	.60	2.00
Glory of Enkhuizen	.10	.20	.65	2.25
Golden Acre (Original)	.10	.25	.75	2.50
Jersey Wakefield (New Selec'd)	.10	.20	.60	2.00
Manns' Superior Jersey	.10	.30	1.00	3.50
New Leader	.10	.20	.75	2.50
Yellows Resistant Varieties				
Detroit (Resistant Golden Acre)	.10	.30	1.00	3.50
Jersey Queen	.10	.25	.85	3.00
Marion Market	.10	.25	.85	3.00

***YELLOWS RESISTANT VARIETIES**—The State of Wisconsin and several other State Departments of Agriculture have for a number of years been working on the best commercial cabbage varieties, adapting them to resist yellows or wilt. It is now possible with these resistant stocks to grow cabbage successfully even on diseased land, by sowing seed which is grown under special conditions to make it resistant. While the cost of this seed is somewhat higher than non-resistant seed, there is the added advantage of securing stock which has been reselected for conformity to true type and heading quality. Therefore these improved varieties are most desirable for both diseased and clean ground.

New Selected Jersey Wakefield

CABBAGE

SECOND EARLY SORTS

Volga One of the earliest main crop cabbages of superior quality. Very desirable where a large, uniformly round head with short stem and compact growth is wanted. Sure to produce a crop under difficult conditions, good keeper.

All Head Early or New Early Remarkably solid and uniform in color as well as in shape and size, its sure heading qualities and tenderness make it a favorite for the home garden. By reason of its compact growth, it is possible to produce 1,000 more heads per acre than many other good sized varieties. For winter use sow in July. Splendid sort for kraut making.

Early Flat Dutch Excellent large early flat sort, producing solid heads that mature with Early Summer. The stem is short and it has comparatively few outer leaves. Compares favorably with Large Late Flat Dutch but much earlier and smaller.

American Drumhead Savoy This is the finest of the Savoy class and very distinct from all other sorts. It forms the hardest heads and is the best for either early or late crops. The leaves are heavily crimped or savoyed and grow closely about the large, solid, dark green heads. The flavor is far superior to that of other cabbages, and for this reason is very much in demand. It is an excellent keeper and very hardy. Entire "pits" of it will keep in perfect condition until May.

New Danish Round Head Compared with Danish Ball Head, has less outer foliage. The heads are larger in size and are set on shorter stalks, maturing two weeks earlier. They are extremely solid, of sweet flavor and tender texture.

Henderson's Succession The best very large midseason **cabbage**, about a week later than Early Summer but much larger and can be planted closer because of its compact growth. It is sure to head, very uniform in habit and the quality is excellent.

All Seasons A reliable variety to use when only one planting of cabbage is made. It is equally as good for fall and winter as for summer use. Nearly as early as Early Summer and much larger heads of the best quality are produced.

****Wisconsin All Seasons*** Yellows resistant, all seasons.

Sure Head Extremely popular with the private gardener because of the sure heading qualities and the remarkably large, uniform, heavy heads. A good keeper and one of the best for late crops.

Danish Ball Head or Hollander A very hardy sure heading, heavy variety, which has proven to be the best keeper and the most desirable for distant markets. Exceedingly hardy and standing dry weather very well.

****Wisconsin Hollander Yellows Resistant*** A disease resistant strain of the Danish ball head type, very large, hard, sure heading.

Golden Acre

American Drumhead Savoy

LATE OR WINTER SORTS

Pointed Head Winter Sow the seed in time to set out plants first week in August. Dependable header, very solid, of fine quality, excellent keeper and shipper. Stands temperatures down to 24 degrees. Ready for market earlier than the Southern crop.

Houser Very popular with large cabbage growers in Pennsylvania. An extremely large, late sort, producing very hard round heads.

Premium Flat Dutch A very good variety for fall use or for making kraut. The heads are very solid, tender and of superior quality. They mature earlier than other late varieties but do not keep as well over the winter.

Extra Large Late Flat Dutch The best and most profitable late variety, possessing all the qualities a winter variety should have. It is hardy, vigorous, and high in quality. The heads are "as solid as a stone" and for that reason keep well for winter use. A favorite with the private gardener as well as the trucker.

PRICES

Variety	Pkt.	Oz.	¼ Lb.	Lb.
All Head Early or New Early	$ .10	$ .20	$ .60	$2.00
All Seasons	.10	.20	.60	2.00
American Drumhead Savoy	.10	.25	.75	2.50
Chieftain Savoy	.10	.35	1.00	3.50
Danish Ball Head or Hollander	.10	.20	.60	2.00
Early Flat Dutch	.10	.20	.60	2.00
Early Summer	.10	.20	.60	2.00
Extra Large Late Flat Dutch	.10	.20	.60	1.75
Henderson's Succession	.10	.20	.60	2.00
Houser	.10	.25	.75	2.50
Mammoth Rock Red	.10	.25	.85	3.00
New Danish Round Head	.10	.25	.75	2.50
Pointed Head Winter	.10	.20	.65	2.25
Premium Flat Dutch	.10	.20	.60	1.75
Sure Head	.10	.20	.60	2.00
Volga	.10	.20	.60	2.00
Yellows Resistant Varieties	Pkt.	Oz.	¼ Lb.	Lb.
All Head Select	.10	.25	.90	3.00
Globe (Resistant Glory)	.10	.25	.90	3.00
Wisconsin All Seasons	.10	.25	.90	3.00
Wisconsin Hollander	.10	.25	.90	3.00

Borecole—Dwarf Green Scotch

BORECOLE Scotch Kale

Extensively grown in this section for marketing during the winter months, when other vegetables are scarce. Borecole should be grown like cabbage, the seed being sown from early spring to the middle of August. It is customary to pull off the lower leaves and let the plant grow on to furnish a continuous supply.

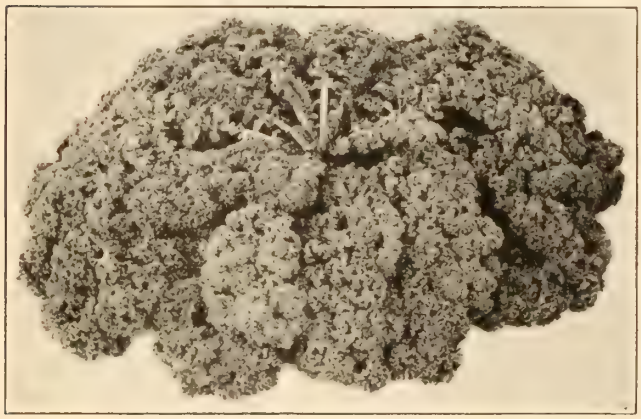
Hardy Winter This variety is one of the most salable and profitable sorts for either the home or market gardener. The plant attains a height of 18 inches and produces an abundance of beautiful light green leaves, which are densely curled and crimped. It is extremely hardy and has the additional advantage of putting forth a second crop of leaves after the first have been gathered or have fallen off.

Superior Extra Curled Green Scotch The leaves of this variety are very much more curled than the Dwarf-Green Scotch, and many more bushels per acre can be cut due to the extremely vigorous growth, which is characteristic of this variety. Nearly as hardy as Hardy Winter, and very popular with many of our customers.

Curled Perfection An improved type, specially rogued and developed from a privately held American stock. Well curled and of a wonderful dark green color; winters well and commands top prices.

Dwarf Green Scotch This excellent sort is low spreading and compact in its nature of growth, forming a mass of leaves which are beautifully curled and mosslike in appearance. The color is an attractive bright green and the quality is excellent.

New Blue Curled Scotch Just as hardy as Hardy Winter and having very curly dark blue-green leaves.



Borecole—Curled Perfection

BRUSSELS SPROUTS

1 oz. will sow 500 ft. of drills or 3,000 plants.

Sow in April for early crop or in early June for a late fall crop. Transplant to rows which are 3 to 4 feet apart, 18 to 24 inches apart in the rows. Will live through the winter without protection.

Danish Prize Found to be the best variety both in quality and productiveness. The sprouts develop very evenly over the entire stem, the lower sprouts being as tightly folded and as solid as those higher up.

Borecole—Superior Extra Curled

COLLARDS

Georgia, Southern or Creole The chief Southern variety for greens, growing 2 to 3 feet high and forming a large, loose, open head or cluster of leaves with a rather long stem. One ounce of seed will sow 300 feet of drill; two pounds per acre.

PRICES

Variety	Pkt.	Oz.	¼ Lb.	Lb.
BORECOLE				
Curled Perfection	$0.10	$0.15	$0.30	$1.00
Dwarf Green Scotch	.10		.25	.75
Hardy Winter	.10	.15	.45	1.50
New Blue Curled Scotch	.10		.25	.75
Superior Extra Curled	.10	.15	.40	1.25
BRUSSELS SPROUTS				
Danish Prize	.10	.20	.60	2.25
COLLARDS				
Georgia, Southern or Creole	.10		.20	.60
Cabbage Collards	.10		.20	.60

Cauliflower—Manns' White Mountain, Grown in Maryland as easily as cabbage.

CAULIFLOWER

1 ounce to 2,000 plants.

For an early crop sow the seed either indoors or in a hot-bed in January or February, transplanting them to 2 or 3 inches apart, thus allowing the plants to put forth a vigorous growth before being set in the permanent rows.

As soon as danger of freezing is over, set the plants in the open ground in rows 2½ to 3 feet apart and 18 inches apart in the row. Cultivate often and thoroughly. For fall crop sow the seeds during April or May. It is well to plan so that the early crop heads before very hot weather and the late crop matures after hot weather.

White Mountain See page 1.

Early Snowball The best early variety in cultivation. If planted March 1st, large heads will be produced early in June, and scarcely a single plant will fail to form a head.

Dry Weather Cauliflower Especially adapted for growing in dry locations where other varieties fail. Easily blanched and remains fit for use for a long time.

Cauliflower Plants SEE PAGE 39.

Broccoli—Sprouting or Turnip Salad

BROCCOLI

1 oz. to 2000 plants.

Calabrese Heading Broccoli Can be grown in the east as perfectly as any shipped into this section. There is also greater public demand for this delicious vegetable making it more than ever a profitable local crop. Sow Manns' Calabrese, grow it carefully and you will have a crop of No. 1 grade produce which sells at a good profit.

40 Day Extra early foliage type used for spring crop "greens." Extensively grown in New Jersey for New York markets.

Italian Green Sprouting (Turnip Salad Broccoli.) Known in the South as Salad Broccoli, grows more "greens" than seven top turnip and is fairly hardy in Maryland, making a profitable cover crop. Sow in August broadcasting two to three pounds per acre and the first sprouts will be ready for market during February or early March, at which time they usually command a very good price.

PRICES

BROCCOLI	Pkt.	Oz.	¼ Lb.	Lb.
Calabrese Heading	$ .10	$ .25	$ .75	$2.75
Green Sprouting (Turnip Salad)	.10	.15	.35	1.25
40 Day	.10	.15	.45	1.50
Cauliflower				
Dry Weather Cauliflower	.25	1.25	4.50	17.50
Early Snowball	.25	1.25	4.50	17.50
White Mountain	.25	2.25	7.50	27.50

Broccoli Calabrese Heading

CARROTS

1 ounce to 150 feet of drill; 4 pounds per acre.

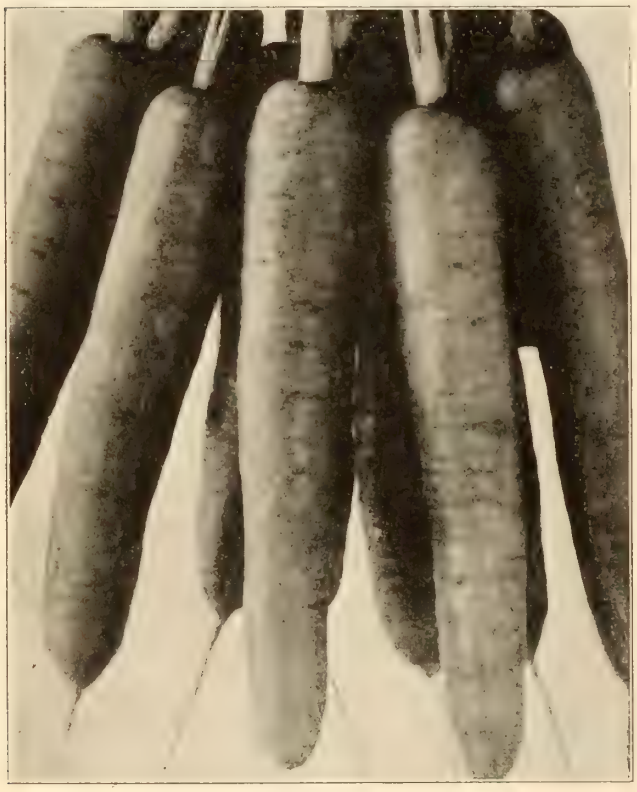
Our stock is grown from choice selected and transplanted roots only, and are of the truest type and richest color money can procure.

CULTURE.—Any good soil will grow this vegetable, but the most perfect roots, however, are developed in rich, friable soil, preferably sandy loam. The flavor and tenderness of the table varieties is secured by having a quick growth, which usually means good growing weather and proper cultivation. Sow as early as the ground can be worked or for late crop until the latter part of July, in drills 15 to 18 inches apart, finally thinning the plants to 3 to 4 inches in the drills. The seed is slow to germinate and if sown early or on moist soil, half an inch is deep enough. When sown during the hot summer months it is well to protect the seed bed with a thin layer of chips or straw as excessive heat will kill the vitality of the seeds before they germinate. After the seed has sprouted remove the covering, selecting the late afternoon for this work. Carrots are usually quite free from pests and diseases. The usual danger from ground worms and slugs is of course always prevalent, but once up they are easier to grow than most vegetables. They are ready for table use in about two months.

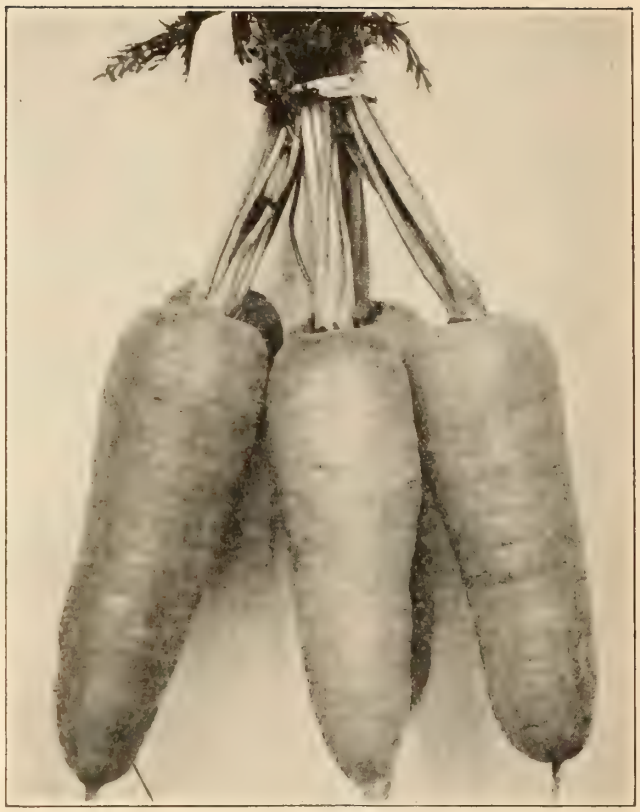
California Bunching Developed especially as a bunching carrot for long distance shipping. Roots about 1½ in. by 7 in. long, cylindrical stump rooted, deep orange color throughout, can be pulled before maturity or allowed to stand weeks later without becoming overgrown.

Chantenay or Model Carrot A most excellent, medium early, half-long variety. Very uniform, stump-rooted but tapering slightly. They are smooth, deep orange-red in color and the flesh is very crisp and tender. Although a medium early sort the roots are suitable for use nearly as early as any, and will also prove very satisfactory if grown for winter use. Very easily harvested and bunched.

New Chantenay Produced from individual root selected stock, therefore a great improvement in uniformity of size and shape. The principal feature of this new strain, however, is its deep solid color.



California Bunching



Chantenay

Sunrise This variety has become a favorite with our market garden trade because of its fine quality, perfect shape and attractive color. Sunrise has been found to be specially valuable for medium and late use, an excellent keeper and thoroughly dependable. It is of most perfect form, pointed-rooted, with a broad, high shoulder. For main planting this sort has no superior, and when sown during June may be depended upon to produce the very best crop of roots to store for winter.

Danvers Half Long This is an exceptionally fine Carrot for private and market garden use. It is slightly longer than Chantenay and our strain produces uniformly smooth and evenly sized roots of handsome appearance. They are orange-red in color and the flesh is sweet, crisp and tender.

Coreless or Scarlet Nantes The earliest of its type; size and shape uniform; bright orange in color; smooth skin; small top.

Improved Long Orange A standard late variety, beautiful and uniform in shape, deep orange in color. The roots grow to a length of 12 inches and are of good quality for table use as well as for stock. They require a deep soil and if full size roots are wanted they should stand at least 8 inches apart in 18-inch rows.

PRICES

Variety	Pkt.	¼ Lb.	Lb.	10 Lbs.
California Bunching	$ .10	$ .25	$ .85	$7.50
Chantenay (Long)	.10	.25	.85	7.50
Danvers Half Long	.10	.25	.85	7.50
Early Horn	.10	.30	.90	8.00
Imperator	.10	.25	.75	7.00
Improved Long Orange	.10	.25	.75	7.00
Louisiana Danvers	.10	.50	1.50	13.50
Nantes Coreless (Special)	.10	.30	1.00	8.50
New Chantenay (Red Cored)	.10	.25	.85	7.50
Oxheart or Guerande	.10	.30	.90	8.00
Red Cored Danvers	.10	.25	.85	7.50
Rubicon	.10	.25	.75	7.00
Sunrise	.10	.30	1.00	8.50
Supreme	.10	.25	.75	7.00
Tendersweet	.10	.25	.75	7.00

Manns' Golden (Special)

POP CORN

South American Giant Pops extremely large creamy white flakes. In greater demand than any other variety.

Variety	Pkt.	Oz.	¼ Lb.	Lb.
CELERY				
Easy Bleacher	$ .10	$ .30	$ .85	$3.00
French Golden Yellow	.10	.50	1.50	5.00
Giant Pascal (Special)	.10	.30	.85	3.00
Golden Heart	.10	.25	.75	2.50
Golden No. 14	.10	.30	1.00	3.50
Golden Phenomenal	.10	.50	1.50	5.00
Golden Plume	.10	.30	1.00	3.50
Golden Self-Blanching	.10	.30	.90	3.00
Manns' Golden (Special)	.10	1.00	3.50	12.50
White Plume	.10	.20	.60	2.00
Winter Queen	.10	.20	.60	2.00
POP CORN				
South American Giant (5 lbs., 50c)				.15

CELERY

1 ounce to 5,000 plants; 20,000 plants per acre.

Celery seed is very slow to germinate and therefore should be started indoors in boxes from February to April or sown out of doors in a finely prepared seed bed during April. See that the seed is not covered too deep and that the bed is kept moist, almost wet until the seeds germinate. When the plants are about two inches high thin out and transplant to a distance of two or three inches apart each way. These must be kept entirely free from weeds and when they are four inches high the tops may be cut off so that the plants will grow more stocky. The plants are usually set out in the permanent bed when five inches high and it is usually best to do this during July or the first of August. In some sections best results are obtained by transplanting in June.

The permanent beds should be thoroughly prepared and well enriched with rotted manure, which should be spaded in deeply, the rows being spaced 3 to 4 feet apart. Cut off some of the root and set the plants 8 to 12 inches apart in the rows, firming the soil tightly, and cultivate them frequently for a period of six weeks. Celery needs plenty of moisture.

When the plants are nearly full grown they should be blanched. This is done by drawing the soil closely about the plants to about two-thirds of their height, being careful not to allow any of the earth to fall between the leaves. Repeat this process every few days until only the top of the leaves are visible. Do not disturb the plants while they are wet or the soil is damp as this is liable to result in injury from rust.

Golden Plume This new strain of Golden Self-Blanching has been pronounced by authorities to be the best of all the early varieties. It matures two or three weeks earlier than any other sort, blanches more quickly and shows less tendency to blight or crown-rot. Distinctly larger and ranker in growth than Golden Self-Blanching; more plainly ribbed and does not grow hollow. The crisp, tender stalks are very broad and the large full plumed centers are displayed to advantage.

Manns' Golden Special A more uniform strain of Golden Plume, has better hearts, is earlier and more easily blanched than other types. Strictly dependable for commercial production.

French Golden Yellow Self-Blanching (Originator's Stock.) Our strain of this very popular sort cannot be excelled in quality or appearance. The plants are of medium size, compact and stocky, with yellowish green foliage. The stalks are solid, crisp, tender, free from strings and of a fine nutty flavor.

Easy Bleacher Two weeks later than Golden Self-Blanching. Blanches readily and is a great favorite with Southern growers who usually plant a full crop of this one sort. Vigorous in growth and a splendid keeper.

Winter Queen Of medium height, an excellent winter keeping sort, producing thick creamy white stalks which are broad, very solid and crisp. The hearts are large and it blanches well.

Golden Heart A distinct variety of sturdy dwarf habit. It is solid, and an excellent keeper, and of fine nutty flavor. When blanched, the heart, which is large and full, is of a light yellow, making it exceedingly showy and desirable for either market or private use.

Giant Pascal A superior keeping sort. The stalks are very large, thick, solid, crisp and of rich nutty flavor; it blanches very easily and quickly, and retains its freshness a long time.

CELERY PLANTS

All Leading Varieties

Ready During July and August

SEE PAGE 39

USE A

FELINS VEGETABLE TYING MACHINE

CORN—Table Varieties

1 quart to 200 hills; 1 peck per acre.

Sugar Corn should not be planted until May, or when the ground is warm. For succession, plant about every two weeks until the last of July. All varieties may be either sown one inch deep in rows three to four feet apart, the seeds being placed about 8 inches apart in the rows, or they may be planted in hills at distances of three or four feet apart each way, allowing not more than 3 plants stand to a hill. The size of the variety and the richness of the soil should determine the distance of planting. Cultivate frequently and thoroughly but shallow until the tassels appear.

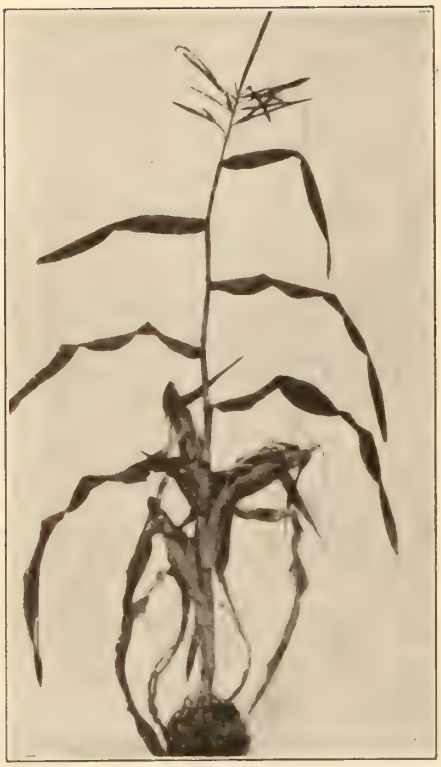
First Early Neck This variety can be planted earlier than any other sort; ear short, grain white. It is not a Sugar Corn.

Delicious Truckers Favorite A 70-day sweet dent variety; ears 8 to 10 inches long having 12 to 16 rows.

Improved Early Adams A distinct improvement over the Old Early Adams, fully as hardy; ears measure from 10 to 14 inches in length, with 12 or more rows to the ear. Grains are narrow and deep, of excellent table quality.

Manns' No. 56 The best, largest, most saleable early market corn we have ever known. It can be planted extremely early without danger of rotting, which makes it possible to produce marketable ears at least five weeks ahead of Stowell's Evergreen. Resembles sugar corn, an excellent shipper, and a money maker.

Early Superior This new variety is of remarkable size considering its earliness. The ears are 8 inches long and have 16 to 20 rows of rather narrow deep grains. The quality is excellent and the attractive appearance of the rich, tender, well-filled ears make it a very desirable sort for the Market Gardener.



Manns' No. 56—Note the low position of the ears, an evidence of extreme earliness.

Country Gentleman Very deep grains, small cob and exceedingly rich flavor. Often produces 3 to 4 ears to the stalk. The grains are "staggered" on the cob, leaving no signs of rows.

Stowell's Evergreen Extra Selected Grown more extensively than any other; a favorite with canners and market gardeners for late use. Ears of large size, kernels very deep, tender and sugary; very productive and remains for a long time in fit condition for table use.

Howling Mob Stalks are of strong, vigorous growth, 5 feet in height; produces 2 large ears of sweetest quality.

Early Evergreen Ripens 10 to 12 days in advance of Stowell's Evergreen, and is equally as good in quality. Kernels sweet and tender; cob small, with irregular rows.

Golden Colonel The new golden yellow corn, resembling Country Gentleman or Shoe Peg in size and formation of kernels, equal if not superior in quality.

White Evergreen A pure white strain of the popular Stowell's Evergreen. The ears are very large and well filled from butt to tip with long, slender, pure white grains.

GROW HYBRIDIZED VARIETIES OF KNOWN ADAPTABILITY

The increased cost is only about $2.00 more per acre, but the yield is increased 25% or more. Practically all of the larger canning companies are now planting Hybrid Corn because of the certainty of a better yield and much better quality. It is important, however, to plant only seed grown by an expert hybridist as hybrid corn is not necessarily all desirable. The process is expensive, highly technical and requires the skill of a plant breeder. Buy Manns' hybridized corn; it has been grown by experts and has proven profitable for this section.

Please Note—It is useless to try to save seed from hybrid varieties of corn. They must be newly developed each year.

Golden Cross Bantam (Hybrid) Produces beautiful 8-inch ears having 10 to 14 rows of golden yellow kernels. It is resistant to wilt or Stewart's disease and is now the standard strain grown for the largest canners. As the crop matures at nearly the same time, it should be planted at intervals of a week or ten days to assure a continuous supply.

Stowell's Evergreen Hybrid So far superior to regular Stowell's Evergreen in yield, quality and appearance that it pays a much larger profit than the ordinary strains. The seed cost is about $3.00 per acre. Other costs, including cultivating, fertilizer, etc., are all the same for either type of corn, but the resulting crop will pay much larger profits.

PRICES

Variety	Pt.	Qt.	Pk.	Bu.
Adams Early	$ .15	$ .25	$1.25	$4.50
Bantam Evergreen	.20	.35	2.00	7.00
Black Mexican	.20	.35	1.75	5.50
Country Gentleman (Shoe Peg)	.20	.35	1.75	5.50
Delicious Trucker's Favorite	.20	.35	1.75	5.50
Early Evergreen	.20	.35	1.75	5.50
Early Superior	.20	.35	1.75	6.00
First Early Neck	.15	.25	1.25	4.50
Golden Bantam	.20	.35	1.75	5.50
Golden Colonel	.20	.35	2.00	7.50
Golden Evergreen	.20	.35	1.75	5.50
Howling Mob	.20	.35	1.75	5.50
Improved Early Adams	.15	.25	1.25	4.50
Late Mammoth	.20	.35	1.75	5.50
Manns' No. 56	.25	.50	3.25	12.00
Narrow Grain Evergreen	.20	.35	1.75	5.50
Stowells Evergreen Ex. Selected	.20	.35	1.75	5.50
Trucker's Favorite, Early	.15	.25	1.25	4.50
Whipples Early White	.20	.35	1.75	5.50
Whipples Early Yellow	.20	.35	1.75	5.50
White Evergreen	.20	.35	1.75	5.50
HYBRIDS				
Golden Cross Bantam Hybrid	$ .25	$ .50	$2.85	$10.50
Marcross 13x6	.50	.85	5.00	17.50
Stowells Evergreen Hybrid	.50	.85	5.00	17.50
Top Cross Country Gentlemen	.25	.50	3.50	12.50

FIELD CORN

PECK, 75 Cents; BUSHEL, $2.50 *(Except Hybrids)*

Manns' open pollinated stock has been especially grown and selected for seed purposes

We have carefully followed Maryland Agricultural Experiment Station's reports in selecting for you the Hybrids best suited for Maryland.

HYBRID CORN

Increased acreage planted to Hybrid Corn in Iowa proves it most profitable.

35,000 acres in 1933; 1,295,000 acres in 1937.

Because: Hybrid Corn increases yield 15% to 25%, is resistant to smut, rust and wilt; has deeper and more vigorous root systems, therefore less affected by drought or severe wind, the uniform maturity practically eliminates barren stalks and nubbins. Hybrid seed has never been available in sufficient quantity to supply the demand. Place your order early.

Manns' Hybrid Yellow Dent Experiment stations and private tests have proven this Hybrid to be the highest yielding corn for this section; no other open pollinated or hybridized corn has equalled it. Ears 10 inches long, having 16 rows of deep grain on a small cob, stalks 8 feet. Qt., 35c; pk., $2.00; bu., $7.00.

Manns' Hybrid White Dent Highest yielding white corn in trial of fifty leading varieties, producing 20% more than its closest rival. Qt., 35c; pk., $2.00; bu., $7.00.

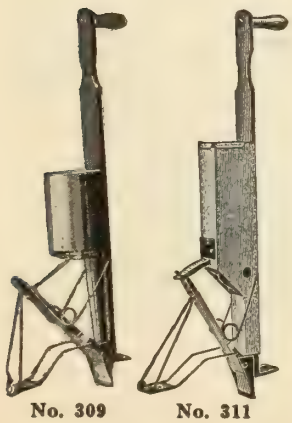
Hybrid Sweepstakes Ensilage Extremely tall, rank grower producing many more tons of ensilage per acre than open pollinated sorts. Qt., 35c; pk., $2.00; bu., $7.00

Clark's Early Smoky Dent This new introduction has been developed by one of the largest and most reliable growers of corn in this country. Early Smoky Dent is today the earliest Dent Corn in cultivation, maturing in 75 to 80 days; is a good yielder and entirely free from disease; grows strong, quick, and has splendid 7 to 8 foot fodder.

Golden West This variety will yield a larger crop than any other open pollinated corn. It is vigorous in growth, very deeply rooted and produces broad-leaved stalks of medium height. It is most attractive in appearance, and the ears usually have 18 to 20 rows of large kernels which are tightly wedged to make a solid ear. It requires about 100 days to mature and deserves the attention of any grower who wants a big crop of fine quality yellow corn.

Pride of the North Maturing perfectly in 90 days and being very hardy and prolific. Pride of the North has become a favorite among Northern growers and planters needing a 90-day yellow variety. The ears are of medium size with very small red cob. The kernels are closely set, long and compact.

Use CROW REPELLENT and do less replanting.
$1 size treats one Bushel.



No. 309 No. 311

No. 311—Acme Segment Corn Planter

Automatic slide type, adjustable for number of Kernels and depth of planting. Has Chinese bristle brush cut-off. Can be used for beans. $2.00.

No. 309—Acme Rotary Automatic Corn Planter

Full rotary Drop; having adjustable cast disk or seed plates, and depth gauge. Extremely accurate; also plants beans and peas. $2.50.

Golden West

Leaming Improved Dent A very popular and extremely productive variety. On good lands the stalks grow tall, producing two good ears to each stalk. The ears are long, with small red cob well filled with grains of medium size, but deep, of a rich golden color. It ripens with us in from 100 to 110 days and makes a good crop.

Iowa Silver Mine The National White Corn. A remarkable drought resister and under adverse conditions seems to pull through and make a crop where other varieties fail. Silver Mine is deep grained, pure white, rough-topped, with a small, white cob. Ears run from 9 to 12 inches long, with 16 to 20 rows of pure white kernels. Stalks medium height, very leafy, with broad blades, frequently bearing two ears weighing 1 to 1½ pounds each. Iowa Silver Mine has probably taken as many sweepstakes and first premiums as any corn in existence.

Iowa Gold Mine With the expert farmer Gold Mine is known as medium early, between the 110 day and the extra sorts that mature in 85 days. It is a great producer and sure cropper. Ears are medium symmetrical. Color bright golden yellow. The grain is deep and the cob is small.

Golden Beauty It is a large and broad-grained yellow corn. The ears of perfect shape with from ten to fourteen straight rows of grains. The cob is very small.

Lancaster County Sure Crop A great favorite with dairymen as a silage variety and also extremely valuable as a husking sort. Yields large crops even under adverse weather and soil conditions. Matures for silage in 90 days and for grain in 100 days producing long ears of deep large yellow grains.

Ried's Yellow Dent Probably the most dependable cropper of all yellow varieties.

Boone County White Boone County is a very large white corn, something like Silver Mine, but larger and later in maturing. Ears well filled out at both ends, cylindrical, 9 to 11 inches long, averaging 20 rows, some 18 to 22. Grain very deep, a little rough. Cobs white, of medium size. Matures in 110 to 120 days.

Improved Hickory King Largest grains of any white variety. Matures early and very productive. Ears set low, are of large size, well filled, very deep grained. It produces well, even on light land.

Cuban Giant Ensilage Well known as the leading variety for the production of fodder.

Pamunkey and Early Eureka Ensilage

Large Smooth Prague Celeriac

CELERIAC

Sow seed and cultivate same as celery, with the exception that it is not necessary to blanch the plants. When the roots attain a diameter of two inches they are fit for use. To keep these through the winter, pack in damp earth or sand and store them in a cellar or leave them out of doors, covering with earth and straw for protection.

Large Smooth Prague One of the largest, very smooth and almost round with very few side roots. Plants are vigorous, with large dark green foliage.

CHICORY

Witloof (French Endive)

A very choice winter salad, forced in hot-beds from roots; producing solid oblong heads blanched ivory white.

CRESS

CURLED OR PEPPER GRASS

Sprinkle seed freely along shallow drills 1 foot apart at intervals through spring and summer, as desired.

American Upland This small salad is much used with lettuce.

True Water Thrives only when its roots and stems are submerged in water.

Chinese or Celery Cabbage

CHINESE CABBAGE

Chinese or Celery Cabbage belongs to the cabbage family but more closely resembles lettuce. For best results plant the seed late in July or very early in August as spring plantings in this section are liable to bolt to seed. Plant the seed in the permanent bed and thin out to stand 12 to 15 inches apart.

Pe-Tsai Wong-Bok The finest Chinese Cabbage in existence. The heads are large, compact and the crisp, tender interior blanches to a creamy white. It will stand long before bolting to seed and is not injured by light frosts.

CHIHILI (or Improved Pekin)—A longer and more slender type than Wong Bok, rapidly becoming popular in New York and Washington markets. Of excellent quality and should be more generally grown.

CHARD (SWISS)

Plant the seeds the same as ordinary beet seeds but thin out at first to 6 inches apart, later to 1 foot apart. Ready for use in about 60 days.

Fordhook Giant The best Swiss Chard in cultivation, producing extremely large, heavily savoyed leaves of a beautiful glossy, very dark green color. The ribs average three inches broad and are pure white.

Swiss Chard—Fordhook Giant

Cardoon	Pkt.	Oz.	¼ Lb.	Lb.
Smooth White Solid	$ .10	$ .25	$ .75	$2.75
Celeriac				
Large Smooth Prague	.10	.20	.50	1.75
Chard (Swiss)				
Fordhook Giant	.10	.15	.25	.75
Lucullus	.10		.25	.75
Chicory				
Ciccoria Catalogna (Radichetta)	.10	.25	.75	2.25
Witloof	.10	.15	.35	1.25
Large Rooted or Common	.10	.15	.35	1.25
Chinese Cabbage				
Pe-Tsai Wong-Bok	.10	.15	.50	1.50
Improved Pekin—Chihli	..	.20	.60	2.00
Cress				
American Upland	.10	..	.30	1.00
True Water	.10	.40	..	...

CUCUMBERS

1 ounce to 100 hills or 50 ft. of row; 2 lbs. per acre.

CULTURE.—Plant as soon as the weather becomes settled in hills 4 feet apart each way, with 8 or 10 seeds in each hill, cover half an inch deep, smoothing the hill off with the hoe. Keep the soil well stirred, and when the plants are out of danger of insects, leave 3 or 4 plants to the hill. For pickles, plant from the first of June to the first of August. The fruit should be gathered when large enough, whether required for use or not, for if left to ripen on the vines, it destroys their productive uses.

Longfellow Cukes grown by Mr. Thos. Rohe

A & C Manns' selection of this now popular variety is far Superior to Colorado, Taxpayer, etc., etc., in shape, color, quality and production. 9 to 11 inches long by 2¼ inch diameter, blunt at both ends, very dark. In some sections A & C has now replaced all other varieties. (65 days.)

Klondike **A favorite with market gardeners and shippers all over the country. The handsome dark green cucumbers average 7 inches long and 2 inches in diameter.**

Early Fortune **One of the best of the very desirable "White Spine" type. It was selected out of a field of Davis Perfect by reason of its outstanding qualities and the strain has now become so well established that large plantings do not show any variation either in plant or fruit. Early, very productive, and having unusual disease-resisting ability. Fruits are 8 inches long with very dark green skin and thick, firm flesh which is crisp and tender. Excellent shipper.**

Long Green (Improved) **Our carefully-selected strain, under favorable conditions, produces fruit averaging from 12 to 16 inches in length. Skin is a deep rich green, flesh solid, crisp and of excellent quality.**

Japanese Climbing **Vines are extra strong, vigorous; being a climbing sort, can be grown on trellises, etc.; valuable in small gardens. Very prolific, from 40 to 50 having been counted on single plants. Fruit long, round, of fine flavor.**

Longfellow or Straight Pack **This new variety was developed primarily for greenhouse culture; its quality, size and attractive appearance, however, have definitely established it as one of the best for outdoor production. The beautiful dark green cucumbers average 12 inches in length and are adaptable for packing in flats for the very highest class trade.**

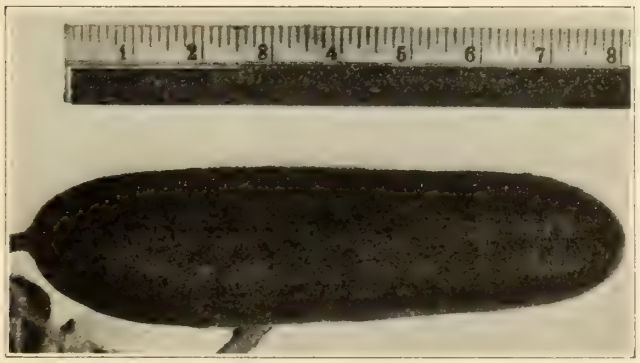
Clark's Special **Profitable variety for Market Gardeners; 8½ to 10 inches long by 2½ inches in diameter, slightly tapered at the ends; very dark green, crisp and firm retaining its fine quality and handsome appearance even when shipped long distances.**

Davis' Perfect **As now selected, this popular new variety is well worthy of praise. The long, even fruits are of fine form, with an intensely dark rich green skin. With very few seeds, the solid white flesh is of superb quality for slicing. The vines are of strong growth and quite prolific.**

Gherkins or Burr **Very small, quite distinct from all others. It is grown exclusively for pickling, and should be picked when young and tender.**

Straight 8 An "All American" Gold Medal Winner, producing symmetrical fruits, well rounded at both ends. Regularly **eight inches in length and from 1¾ to 2 inches in diameter, deep green and free from pale striping and tipping. Vines are vigorous and remarkably productive.**

Davis Perfect



"Straight 8"

PRICES

Variety	Pkt.	Oz.	¼ Lb.	Lb.
A. & C.	$ .10	$ .15	$ .35	$1.25
Black Diamond (or Stays Green)	.10	.15	.30	1.00
Boston Pickling or Green Prolific	.10	.15	.30	.90
Colorado	.10	.15	.35	1.25
Clark's Special (Original)	.10	.15	.30	1.00
Davis' Perfect	.10	.15	.30	1.00
Early Fortune	.10	.15	.30	.90
Evergreen Long White Spine	.10	.15	.30	.90
Gherkins or Burr	.10	.15	.40	1.50
Japanese Climbing	.10	.15	.40	1.25
Klondike	.10	.15	.30	.90
Longfellow or Straight Pack	.10	.15	.35	1.25
Long Green (Improved)	.10	.15	.35	1.25
Straight 8	.10	.15	.30	1.00
Woodruff's Hybrid	.10	.15	.30	.90

EGG PLANT

1 ounce will produce 1,000 plants.

Sow in March in hotbeds, and transplant when 2 inches high into a second hotbed, or let them remain and thin out to 4 inches apart. When the weather becomes settled, transplant into the open ground 3 feet apart each way. Good culture is quite as important as good seed. Work the ground deep, make it rich with well-rotted manure and hoe often.

Black Beauty **The most beautiful and earliest of all large Egg Plants.**

Florida High Bush **Very vigorous and productive; of upright growth holding the fruit well off the ground; color light purple of oblong shape.**

New Hampshire Hybrid The New Hampshire Agricultural Experiment Station developed this variety by hybridizing Black Beauty and Early Dwarf Purple for the purpose of obtaining an extra early, yet good size, Black Beauty type. The resulting hybrid won the All American Silver Medal 1939. It is nearly as large as Black Beauty, very uniform and yields a heavy crop of extra early fruits.

Black Beauty Egg Plant

CHIVES

Chives are a small hardy perennial plant, resembling the onion in appearance and growing in clusters. They are grown for the young leaves, which are produced freely from early in the spring and give a mild onion flavor to sausage, salads and various dishes.

CORN SALAD

1 ounce will sow 20 square feet; 6 pounds to the acre.

Ackersalad **Large Seeded Dutch. A vegetable used as a salad. It is sown in the opening of spring in rows 1 foot apart, and is fit to use in 6 or 8 weeks from sowing. If wanted in early spring, sow in September; cover with straw as soon as cold weather sets in. Can be grown in cold frames, covered with straw mats or shutters, and used any time during the winter.**

Endive—Full Heart

DANDELION

Arlington Strain The best market garden strain, forming a tuft of large, stocky, thick-leaved plants, white-ribbed.

ENDIVE

1 ounce to 100 feet of drill, 3 pounds to the acre.

Ever White Curled Plants moderately dense; leaves coarser than those of the Green Curled, but the mid-rib is yellow and the leaves almost white.

Broad-leaved Batavian (Escarolle) Leaves broad and almost plain; color light green.

Full Heart Batavian (Escarolle) The most widely used variety of Endive; an improved Broad Leaved Batavian with thicker and broader heads; matures slightly earlier, requiring only 90 days from sowing of seed to heading.

Green Curled This is the hardiest variety, and very desirable for the home and market garden. The deep green leaves are beautifully cut and curled, easily blanched, and become very crisp, tender and fine-flavored.

FENNEL

(FLORENCE)

(Finocchia) In great demand with Italian trade and deserves to be more generally used. The leaf stalks are clustered in a bulb-like formation, and when these are about 1½ inches wide, the plants should be hilled up to about half their height.

PRICES				
Variety	Pkt.	Oz.	¼ Lb.	Lb.
CHIVES	.10	.35	1.10	4.00
CORN SALAD				
Ackersalad	.10	.15	.35	1.25
DANDELION				
Arlington Strain	.10	.35	1.25	4.50
Italian (Ciccoria Catalogna)	.10	.25	.75	2.25
EGG PLANT				
Black Beauty	.10	.30	1.00	3.50
Florida High Bush	.10	.30	1.00	3.50
Long Italian	.10	.30	1.00	3.50
New Hampshire Hybrid	.10	.50	1.50	5.00
ENDIVE				
Broad-leaved Batavian	.10	.15	.30	1.00
Ever White Curled	.10	.15	.30	1.00
Full Heart Batavian	.10	.15	.30	1.00
Green Curled	.10	.15	.30	1.00
FENNEL				
Florence		.15	.35	1.25

Kale, Extra Curled—Long Standing

Monstrous Carentan Leek

Early White Vienna

KALE

Broadcast, 2 to 3 pounds per acre; 1 ounce to 200 feet of drill.

The Kales are more hardy than Cabbage, and make excellent greens for winter and spring use. For early spring use, sow broadcast in September and protect during winter. It may also be sown in April or May for later use.

Extra Curled Long Standing An improvement on the well-known German Extra Curled Kale; beautifully curled, of strong, vigorous habit, perfectly hardy and slow-shooting to seed.

Extra Early Siberian Ready for cutting earlier in spring than Long Standing.

Spring Smooth Leaf or Hanover Salad Quick-growing, very hardy smooth leaf sort, tender when young.

SCOTCH KALE BORECOLE

SEE PAGE 10

Kale—Early Siberian

KOHLRABI

1 ounce will produce 1,500 plants.

This forms a bulb above the ground, and its flavor is somewhat similar to Cabbage. Sow in April in rows 18 inches apart, thinning out to 8 inches between the plants.

Early White Vienna Excellent for forcing and of fine quality. The bulbs grow to the size of an apple when ready for use, and are a pale whitish-green.

Triumph-Prague Extremely early forcing variety, winner in "All-American" trials.

LEEK

1 ounce to 50 yards of drill.

Sow early in the spring in drills 1 inch deep and 12 inches apart, when about 6 inches high transplant into deep, rich soil, 5 inches apart; use a dibble and plant deeply, close to their leaves.

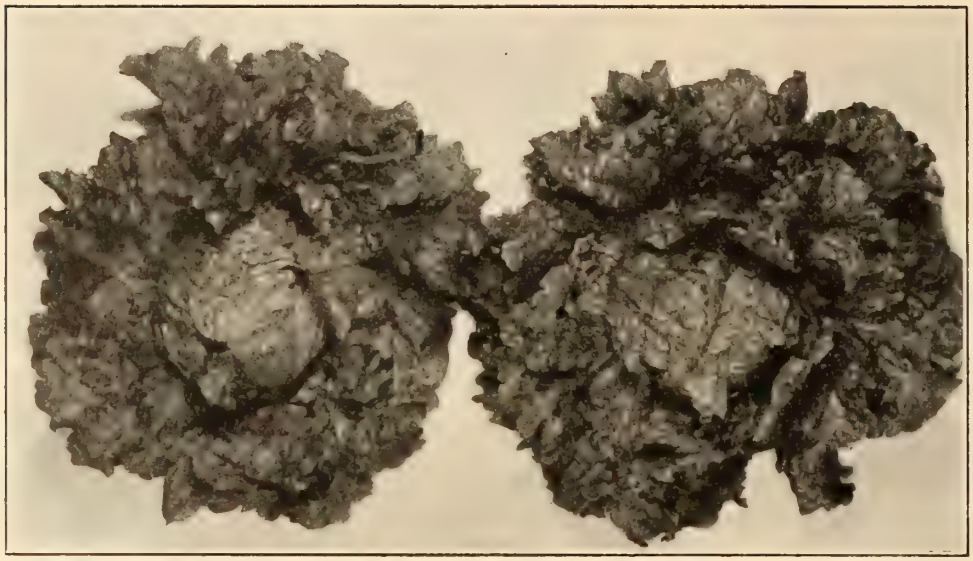
Elephant New, improved large variety with unusually long thick white stalk.

Monstrous Carentan **OR SCOTCH CHAMPION. Of extra large size; the leaves are fan-shaped, of a dark green color; the edible stem is 6 to 8 inches long and 3 inches in diameter.**

HERBS	Pkt.	Oz.	¼ Lb.
Anise	$ .10	$ .15	$ .40
Basil	.10	.15	.50
Caraway, lb., 75c	..	.10	.25
Coriander	.10	.15	.25
Dill, extra large, lb. 75c	.10	.15	.25
Fennel, Florence, lb. $1.25	.10	.15	.35
Fennel, Sweet, lb. $1.50	.10	.15	.50
Lavender	.10	.25	.75
Marjoram, sweet	.10	.25	.75
Rosemary	.10	.30	1.00
Sage, lb. $2.00	.10	.20	.60
Summer Savory	.10	.15	.40
Thyme	.10	.40	1.25

PRICES

Variety	Oz.	¼ Lb.	Lb.	10 lbs.
KALE				
Extra Curled Long Standing		.25	.75	$6.50
Siberian Kale (Extra Early)	.10	.20	.50	4.00
Spring Smooth Leaf (Hanover)	.10	.15	.25	2.00
KOHLRABI				
Early White Vienna	.20	.60	1.75	....
Triumph-Prague	.25	.75	2.75	....
LEEK				
Elephant	.20	.70	2.50	20.00
Liege Hardy Winter	.20	.70	2.50	20.00
Monstrous Carentan	.20	.60	2.00	....



Imperial Iceberg No. 847

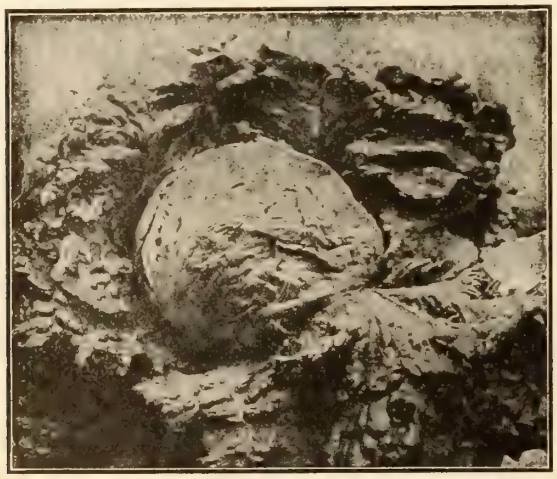
LETTUCE

1 ounce to 2,500 plants; 3 pounds per acre.

Lettuce to be at its best should be grown rapidly, hence the soil should be made as rich and friable as possible by liberal manuring and thorough preparation. For early crop sow in a seed-bed in September or October and protect through the winter with cold frames, which should be removed as soon as danger of severe freezing is past. Lettuce in the open ground will stand some freezing but is killed by prolonged frost or frequent freezing and thawing. The seed may also be sown in hotbeds in March, and the plants, if well hardened, may usually be set in the open ground in April, maturing a crop much earlier than complete open ground cultivation would produce. If, however, it is not convenient to get the plants started either in the fall or early spring in hotbeds, the seed may be sown in open ground from the middle of April until July, selecting varieties suitable for the season.

The plants should stand 8 to 10 inches apart in the rows, and the rows should be about 18 inches apart.

Grand Rapids As a lettuce for greenhouse forcing this variety undoubtedly stands at the head of the list, being of quick growth, hardy, little liable to rot and remaining in condition several days after being fit to cut. Forms a loose cluster of large, thin, bright green leaves, savoyed, finely crimped at edges. Will stand shipping long distances.



New York or Wonderful

Manns' Special Iceberg No. 10 Developed in the East for withstanding Eastern weather conditions. A sure heading white seeded strain of New York. Trial plantings have produced beautiful large solid heads readily accepted by critical buyers. Growers using the various Iceberg types will do well to change over a part of their acreage to Manns' No. 10.

Imperial Iceberg No. 44 Developed in California by Dr. Jagger of the U. S. D. A. primarily as a sure heading, disease resistant variety for shipping to the eastern markets. It's adaptability to many various growing centers and a wide range of climatic conditions make it one of the most dependable and sure heading types of Iceberg for this section.

Imperial Iceberg No. 847 Black seeded strain of New York grown successfully on the West coast for several years. Produces large size, solid, well rounded heads under conditions where other New York types do not succeed.

Cosberg Developed at the U. S. Dept. of Agr. plant breeding station, Beltsville, Md. Destined to become very useful in the East. Heads are of medium size, clear pale green, exceptionally firm. Resistant to tip burn and withstands heat very well.

PRICES

Variety	Pkt.	Oz.	¼ Lb.	Lb.
All Seasons	$ .10	$ .15	$ .30	$1.00
Big Boston	.10	.15	.30	1.00
Chicken (loose leaf)	.10	.15	.30	1.00
Cos, or Romaine, White Paris	.10	.15	.30	1.00
Cos, Extra Dark Green	.10	.15	.40	1.25
Cosberg	.10	.30	.80	2.75
Earliest "Wayahead"	.10	.15	.40	1.25
Grand Rapids	.10	.15	.30	1.00
Iceberg	.10	.20	.50	1.50
Imperial No. 44	.10	.50	1.50	5.00
Imperial Iceberg No. 847	.10	.20	.60	2.00
Manns' Defiance Summer	.10	.20	.60	2.00
Manns' Special Iceberg No. 10	.10	.25	.85	2.85
May King	.10	.15	.30	1.00
New York—Special	.10	.20	.50	1.50
Unrivalled	.10	.20	.50	1.50
White Boston	.10	.20	.50	1.50

Manns' Lettuce Seed is used by the largest commercial growers

LETTUCE (Continued)

All Seasons One of the best all-head Lettuces, standing the hot sun to a remarkable degree, slow to seed. The outer leaves are a bright soft green; the finely-blanched inner leaves are a rich golden-yellow, tender and mild in flavor. The heads are broad and nearly flat at the top, they continue to increase in size for about two weeks after they are ready for use.

May King Extremely early, compact cabbage or heading variety, forming very firm heads of medium size and excellent quality. Color light yellowish-green, tinged with reddish-brown when mature. Inner leaves blanch rich golden-yellow, very tender and buttery.

Big Boston This is a fine forcing variety for cold frames during the winter months, as it produces heads of very large size, often 12 inches or more across, and succeeds better in cooler temperature than most forcing strains. The large heads are beautifully blanched and of superior quality. It also heads well in the open ground during cool weather of spring and fall. Our seed is an extra selected strain of the true stock.

White Boston

Manns' Defiance Summer This variety, introduced by us several years ago, has made a very eventful impression upon the grower, as well as the consumer. It forms handsome, solid heads of enormous size, which remain in good salable condition long after all others have gone to seed. The flavor is excellent; the leaves are beautiful light green. Very profitable for market gardeners.

Unrivalled This lettuce might well be called an Improved Big Boston. Its usefulness and value are identically the same as Big Boston, but it is preferred by market gardeners because of its being a solid green color with no brownish tinge at the border of the leaves; its heads are larger and of better appearance than Big Boston.

White Boston A very light green type somewhat similar in size, shape and uses to Unrivalled and Big Boston. Entirely free from red edge and gaining in popularity among market gardeners.

COS, ROMAINE OR CELERY LETTUCE

Paris Self-Folding White Cos

Grows to very large size, producing long-pointed, compact bunches. The outer leaves are closely folded about the center and interior is well blanched.

Paris Cos Lettuce

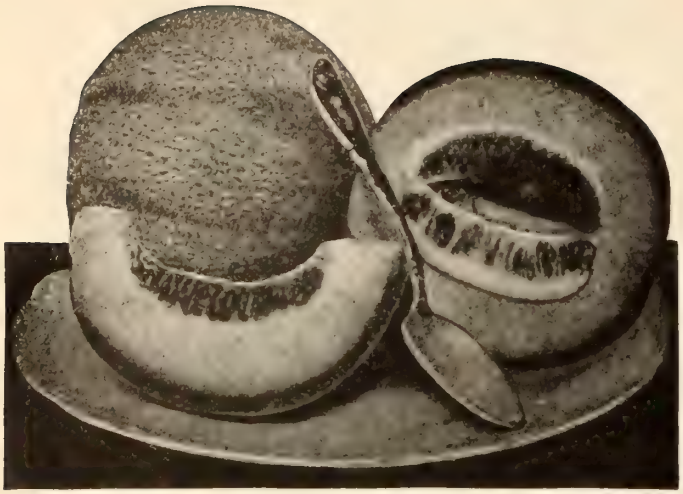
Cos, Extra Dark Green Similar to White Paris but darker in color.

LETTUCE PLANTS
FRESH DAILY IN SEASON—See Page 39

MUSKMELON
CANTALOUPE

1 ounce for 50 hills; 3 pounds per acre.

The most suitable soil for melons is a warm, sandy loam, well worked and enriched with rotted manure. After danger from frost is over, sow ten to twelve seeds to a hill, about 2 inches deep; the hills being six feet apart each way. When the plants have the second pair of leaves and danger from insects is past, thin out to four plants to a hill. Cultivate frequently, deeply away from the plants and shallow close to them. When hoeing, remove the crust from around the plants and replace with fine, loose soil.



Bottomly Cantaloupe

GREEN FLESHED VARIETIES

Knight's Early Maryland An extremely early medium sized melon. Fruit oblong, showing the neck tendency; skin deep green, turning to golden at maturity, well covered with a close gray netting and distinctly ribbed; flesh fairly thick and very sweet; color medium green blending to light pink near the center. The earliest high quality melon and a good shipper.

Jasper Our stock of this Anne Arundel County variety is a definitely established fixed type which is well netted, uniform in size and shape and of excellent quality. It is prolific, medium early and in general a profitable variety to grow.

Long John Somewhat similar in quality and appearance to Bottomly, but much larger and more elongated. Has green flesh and commands good prices in the Baltimore market.

Honey Ball Possess characteristics that make it one of the finest melons that has ever been offered to the grower, the shipper and the consumer. Exceedingly prolific, producing as many as fifteen to twenty large cantaloupes to the plant. Every commercial grower and home gardener should have at least a trial patch of Honey Ball.

Honey Dew A melon of the Cassaba type. The fruit is large, oval in form, about 10 inches long and 8 inches in diameter; thick flesh is light green in color, ripening to the rind, very tender, with an extreme sweetness. The vines are vigorous and set 6 to 10 melons to the hill. An excellent shipper, will keep for several weeks even when fully ripe.

Sweet Air An early, well netted medium sized, good quality and good shipping sort; grown largely in Southern Maryland.

Rocky Ford This has become one of the most popular of small or basket melons. The fruit is oval, slightly ribbed, densely covered with coarse netting. Flesh light green, very thick and highly flavored.

SALMON FLESHED VARIETIES

Hale's Best Original. The earliest strain, fruits vary in size and shape but average 7 inches long; 5 inches in diameter, distinctly ribbed.

No. 36 Most popular type, uniform size and shape, more heavily netted and less ribbed than Original Hale's Best.

No. 45 Mildew Resistant. Can be thoroughly vine-ripened and shipped long distances with its delicious flavor completely retained. It is being marketed under the name of "Sweet Eatin" and quality is being stressed by National advertising.

PRICES

MUSKMELON	Pkt.	Oz.	¼ Lb.	Lb.
Benders Surprise	$ .10	$ .15	$ .40	$1.25
Bottomly	.10	.15	.30	1.00
Burrell Gem	.10	.15	.30	.90
Golden Honey Dew	.10	.20	.50	1.50
Hale's Best (Specify strain wanted)	.10	.15	.30	1.00
Honey Ball	.10	.15	.40	1.25
Honey Dew	.10	.15	.30	1.00
Hearts of Gold (Improved)	.10	.15	.30	1.00
Imperial	.10	.15	.30	1.00
Jasper	.10	.15	.40	1.25
Knight's Early Maryland	.10	.15	.30	1.00
Long John	.10	.20	.60	2.00
Pollock No. 10-25	.10	.15	.30	1.00
Pride of Wisconsin	.10	.20	.50	1.50
Rocky Ford	.10	.15	.25	.75
Schramm	.10	.15	.30	1.00
Sugar Rock	.10	.15	.40	1.25
Sweet Air	.10	.15	.40	1.25
CITRON				
Red Seeded	.10	.15	.35	.85

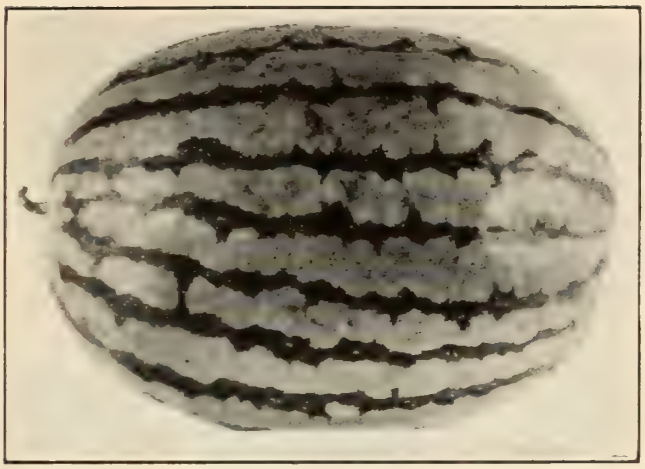
Burrell Gem Of sweet and aromatic flavor, oblong shape, smoothly rounded ends, closely netted and slightly ribbed dark green skin. Fruits average 6 inches long by 4 inches deep. Very fine for marketing.

Sugar Rock A valuable New Variety of a Distinct Type. Sweet as sugar and solid as a rock. Sells on sight and its marvelous flavor brings the buyers back for more. On account of its heavy netting and tough rind, can be thoroughly ripe before picking. A remarkable heavy yielder, and a real money maker.

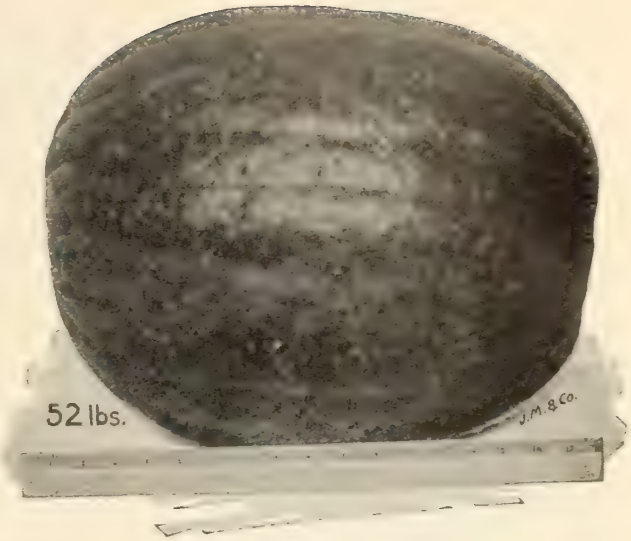
CITRON

Red Seeded A small globular variety, striped and marbled with light green. Flesh white and solid; seeds red. Used exclusively for pickles and preserves.

Imperial—Hale's Best



Dixie Queen



Stone Mountain

WATERMELON

1 ounce for 30 hills; 3 or 4 pounds per acre.
Cultivate exactly as for Cantaloupe, except that the hills should be 8 to 10 feet apart.

Dixie Queen A fine-flavored, early, 80-day round melon; skin striped dark green and greenish ivory, flesh bright red, solid and sweet. Shipped as White Seeded Cuban Queen.

Kleckley's Sweet This very popular melon is one of the best for nearby markets. Fruits are medium size, oblong, of a dark green color and have very thin rind. Flesh bright scarlet with solid heart, crisp, sugary and melting, and entirely free from stringiness.

Tom Watson A large long melon with dark green rind and light crimson flesh of excellent quality, and a splendid shipper.

Stone Mountain The outstanding introduction in the last few years. Its growth in popularity is phenomenal. Can be shipped long distances and its edible qualities are distinctly superior to any other shipping variety.

Sweetheart Large heavy fruits of oval or round form; skin very pale green, with distinct netted lines of a slightly darker shade. The solid flesh is a deep rich red, crisp and melting; its luscious quality has made it a leading favorite in the Eastern markets.

Irish Gray The color is a distinct mottled greenish gray; the flesh is red, sweet, crisp, and free from stringiness. An unusual melon, for although a good shipper it is equally fine for the home garden.

MUSHROOMS

Anyone with a fair understanding of the cultural requirements can grow Mushrooms successfully in any climate and in any season where the following conditions obtain:

1. Good spawn, procured from a reliable source.
2. A properly prepared bed with reasonable protection against weather extremes.
3. A temperature not greatly exceeding 60° F. nor much lower than 50° F.
4. A fairly moist temperature, avoiding the too frequent and direct application of water to the beds.
5. A gradual renewal of the air, avoiding draughts.

One brick will seed an area of 8 to 10 square feet. One quart bottle will seed an area of 35 to 40 square feet, depending on the size of piece planted. Full cultural directions free with purchase of spawn. **Bricks 30c ea., 10 bricks $2.75, bottle spawn $1.00 ea.**

PRICES

MUSTARD	Oz.	¼ Lb.	Lb.	10 Lb.
Fordhook Fancy	$ .15	$ .20	$ .50	$4.00
Giant Southern Curled	.15	.20	.50	4.00
Tendergreen (Mustard Spinach)	.15	.20	.50	4.00

WATERMELON	Pkt.	¼ Lb.	Lb.
Dixie Queen	$ .10	$ .35	$1.25
Florida Favorite	.10	.25	.75
Irish Gray	.10	.25	.75
Kleckley's Sweet	.10	.25	.75
Stone Mountain	.10	.25	.75
Sweetheart	.10	.25	.75
Tom Watson	.10	.25	.75

MUSTARD

Fordhook Fancy Darker green and leaves more curled at the edges than any other sort.

Giant Southern Curled The largest variety, forming a mass of finely curled leaves; hardy and vigorous.

White Silver Skin Onion

ONIONS

To grow large bulbs 1 ounce to 100 feet of drill; 4 to 5 pounds to the acre. To grow sets 10 ounces to 100 feet of drill; 50 pounds to the acre.

The Onion must have a clean and very rich soil. Use well rotted manure freely, and get the seed in as early as possible in the spring, no matter if it is cold and unpleasant. If onions do not get a good growth before hot, dry weather, the crop is sure to be a failure. Keep the soil mellow and clear of weeds. Sow in shallow drills, not less than a foot apart nor more than half an inch deep. As onions grow on top of the ground, they may be allowed to remain pretty thick, no matter if they crowd each other. In hoeing, destroy weeds and keep the ground mellow; do not cover the young bulbs with earth.

Early Yellow Globe Matures medium large uniform globe-shaped bulbs in about 98 days from time of sowing. Keeps exceptionally well.

White Silver Skin, or Portugal This is the most popular variety of all white Onions; is almost exclusively used for growing sets. It is a good keeper. The bulbs grow to good size, ripening early and quite evenly. The flesh is mild and sweet, the thin skin a clear silvery white, of handsome appearance if the bulbs are gathered as soon as ripened and carefully dried under shelter away from the strong sunlight. When seed is sown at the rate of 20 to 25 pounds per acre, it makes bulbs of suitable size and most desirable for pickling.

White Pearl Very fine and very early variety. Bulbs when well grown are large, round, flattened, with a delicate pure white skin; flesh very mild in flavor. In the South this variety is largely planted for sets.

Southport White Globe Pure white, true globe form with very crisp flesh, exceedingly mild and fine grained, usually commands highest prices.

Japanese One of the best for the production of large onions for Fall and Winter market, yielding almost twice as many bushels per acre than any other set onion. Somewhat similar to Flat Danvers in color and shape but a trifle thicker and very much larger in circumference. They are very mild, excellent keepers, rapid growers and very few go to seed. The appearance, size, quality and wonderful yields of this variety give it a prominent place among the most valuable sorts.

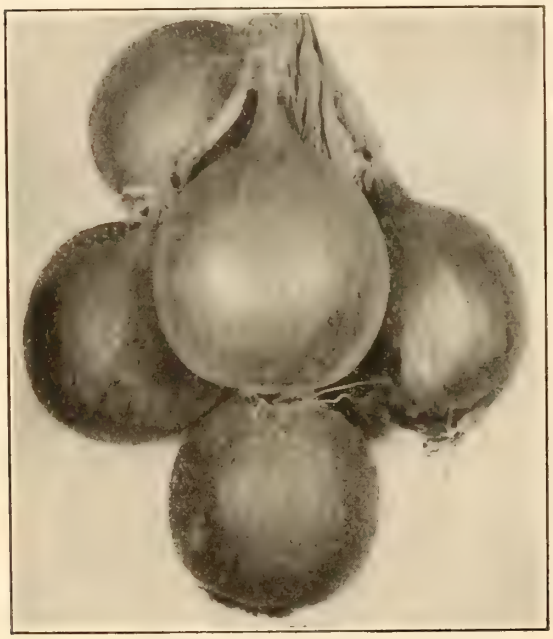
Prizetaker Produces large, well-ripened bulbs the first season from seed; flesh white; crisp and mild in flavor. The skin is thin, of a bright straw-yellow; form nearly a perfect globe. Under ordinary cultivation this variety will yield bulbs nearly three times as large as the Globe Danvers, while under special cultivation specimen bulbs have been raised to weigh from 4 to 5 pounds each.

Yellow Globe Danvers Our superior stock of this celebrated variety is of fine round shape. It grows to good size, with thin yellow skin, white flesh, fine grained and excellent quality. It ripens early, keeps well and is very productive.

Use a

FELINS TYING MACHINE

FOR BUNCHING SPRING ONIONS



Early Yellow Globe

ONION SETS

FINE QUALITY MARKET GARDENERS STOCK

SCREENED TO ⅞ INCH

PRICES

Variety	Pkt.	Oz.	¼ Lb.	Lb.
Australian Brown	$ .10	$ .20	$ .50	$1.75
Early Yellow Globe	.10	.20	.60	2.00
Ebenezer	.10	.20	.50	1.75
Prizetaker	.10	.20	.60	2.00
Red Wethersfield	.10	.20	.50	1.75
Riverside Sweet Spanish	.10	.25	.75	2.50
Southport White Globe	.10	.25	.75	2.25
Southport Yellow Globe (Brigham)	.10	.25	.75	2.25
White Bunching	.10	.20	.60	2.00
White Pearl	.10	.20	.60	2.00
White Queen	.10	.20	.60	2.00
White Silver Skin, or Portugal	.10	.20	.60	2.00
Yellow Globe Danvers	.10	.20	.60	2.00

ONION SETS	Qt.	Pk.	Bu. 32 lbs.
Japanese (Yellow)	$ .15	$ .75	$2.00
White Silverskin	.15	.75	2.25
Yellow Danvers	.15	.75	2.00

Prices subject to change. Postage Extra.

Okra

OKRA OR GUMBO

10 pounds to the acre.

Sow in drills during April and May. Thin until plants are 12 inches distant, and draw earth to the stems for support.

Improved Dwarf Green Prolific or Density A distinct variety, growing about 14 inches high. Grown in competition with the ordinary dwarf, it produces twice the number of pods, which are very smooth and beautiful.

Lady Finger Plants producing long, slender pods of pale green color.

Perkins' Mammoth Green Pod A splendid variety. Very prolific, with slender long green pods of best quality and most desirable color for canning.

PARSLEY

1 ounce to 150 feet of drill.

Sow in rows 1 foot apart and 1 inch apart in the row. The seed is slow to germinate, and should be given the most favorable conditions. A deep, rich loamy soil is required. For winter use a few plants placed in a box in the cellar will give a supply.

Champion Extra Dark Moss Curled The large leaves are very heavily crimped and curled. Very productive and most attractive, both on account of its dark green coloring and fine mossy appearance.

Green Castle An extremely hardy, late or main crop market gardeners variety which grows rather slowly early, but is tall, densely curled and can be depended upon as the most profitable Parsley for fall and winter crop.

Manns' Special Triple Curled Vigorous, fast growing, beautifully curled, bright vivid green strain. Superior to Moss Curled in production and appearance.

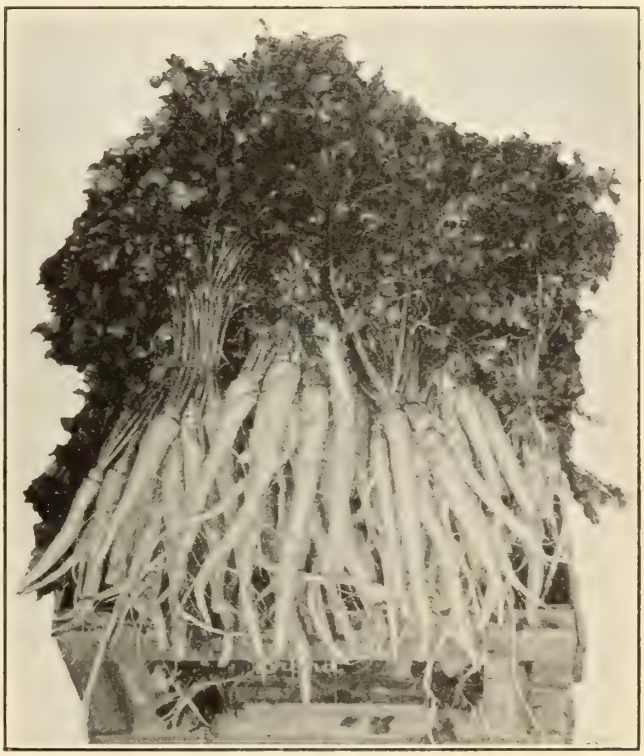
Turnip-Rooted, or Hamburg The large fleshy root, which resembles the root of a Parsnip, and is highly esteemed for flavoring soups, stews, etc.

PRICES

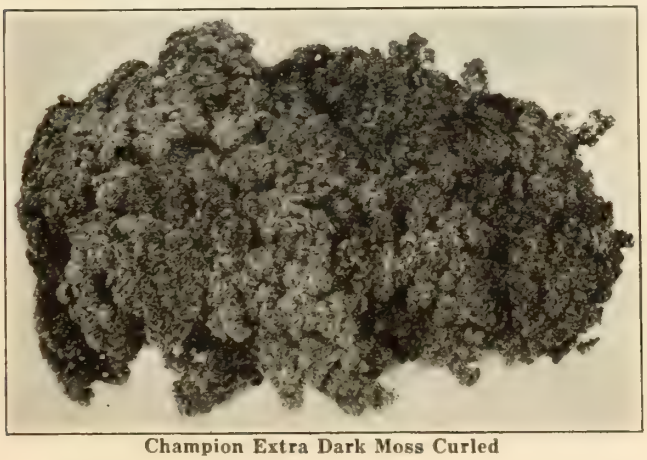
OKRA OR GUMBO

Variety	Pkt.	¼ Lb.	Lb.
Improved Dwarf Green Prolific	$ .10	$ .20	$ .50
Lady Finger	.10	.20	.50
Perkins' Mammoth Green Pod	.10	.20	.50
White Velvet	.10	.20	.50

PARSLEY	Pkt.	¼ Lb.	Lb.	10 Lb.
Champion Extra Dark Moss Curled	$ .10	$ .20	$ .65	$5.50
Green Castle	.10	.25	.85	7.50
Manns' Special Triple Curled	.10	.25	.85	7.50
Paramount	.10	.20	.65	5.50
Plain or Single	.10	.20	.65	5.50
Turnip-Rooted, or Hamburg	.10	.25	.75	



Hamburg Parsley



Champion Extra Dark Moss Curled

Manns Parsley grown in N. J., under Irrigation

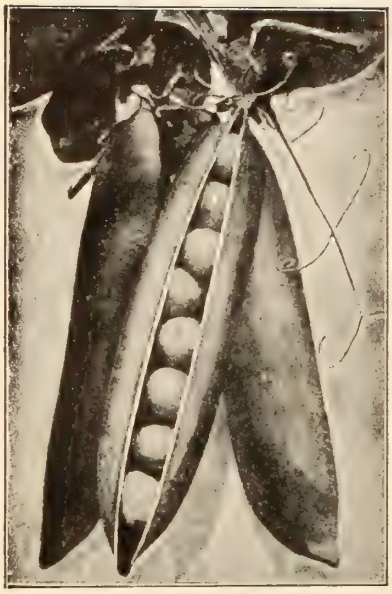
PEAS

1 quart to 100 feet of drill; 1½ bushels per acre.

Peas grow best on a light, rich, mellow soil under cool and moist weather conditions. Fresh manure and very rich or wet mucky soil should be avoided.

The extra early varieties are very hardy and should be planted as soon as the ground can be made ready, while the larger wrinkled varieties, which are not as hardy but of superior quality, may be planted when the soil has become slightly warmed, as the seed will rot if planted too early.

For private use, sow the seed in double rows, 18 inches apart and 3 inches apart in the row; for market, in single rows 2 to 3 feet apart and 1 inch apart in the rows. The peas will give quicker returns if covered only one inch deep, and where earliness is most important they may be treated this way. Larger pods and greater quantity will be produced if the seed is planted in trenches three to six inches deep and covered with only one to two inches of soil. When the plants are five or six inches high, fill the trench level with the surface. This will result in deep rooting, prevent mildew and prolong the bearing season. If the peas are covered to the full depth at first, or if water is allowed to stand in the trenches the seed will not germinate or grow well. The crop should be gathered as fast as it becomes fit for use, as even a few ripe pods left on the vines tend to retard the development of the young pods and prevent the formation of new ones.



Long Pod Alaska

FIRST EARLY SMOOTH VARIETIES

Extra Early Alaska Vine strong and vigorous, 2 to 2½ feet high, of a peculiar light green color, pods 3 to 3½ inches long, straight and blunt at the end. Is ready for picking 49 to 50 days from planting. Seed round, blue, slightly pitted. Matures crop very evenly.

Early Bird The most used and best extra early, large podded Dwarf now on the market. Very desirable for market gardeners and truckers. Seed is practically smooth, dark green in color, can be planted as early as the Alaska. Produces a strong, vigorous vine, dwarfed in length. Pods produced in profusion and are long, large, pointed and well filled with good sized peas. Is an excellent cropper and has replaced practically all other extra early varieties.

Long-Podded Alaska A favorite with truckers and shippers to Northern markets, producing a very early crop of large, broad, well-filled, dark green pods. Equally as hardy as Extra Early Alaska and much larger. The vines usually grow three feet high and the crop will remain fresh a long time after picking.

Mammoth Podded Extra Early An exceptionally early, large podded variety. Matures practically with Alaska and much more productive. Height 3 feet, pods 4 inches long, very dark, broad and round.

WRINKLED VARIETIES

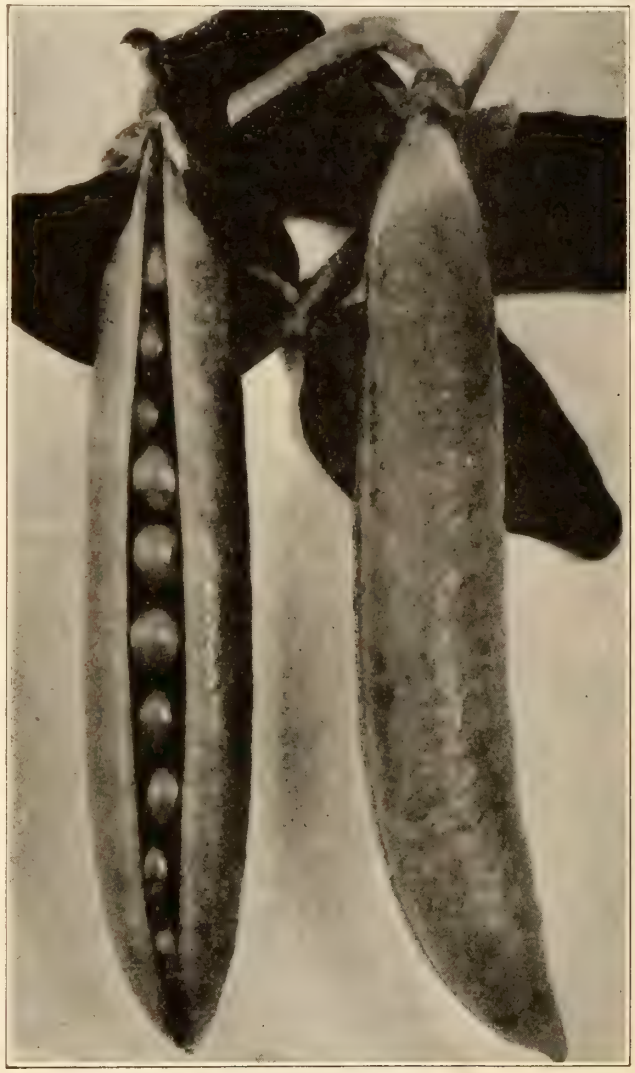
Early Surprise An extra early variety of excellent quality, producing an abundance of dark green pods 4 to 5 inches long, very broad and well filled. The earliness, quality and the wonderfully prolific characteristics of this variety make it a very profitable sort for market gardeners.

Early Wonder Extremely early, of high quality and very productive. Pods are very dark and can be safely shipped long distances. Will soon become very important as a market gardeners variety.

Blue Bantam An improved strain of the Laxtonian type. Very early and produces pods a little darker than the Laxtonian. Vines are 16 to 18 inches high.

PRICES

Variety	Qt.	Pk.	Bu.
Alaska—Wilt-resistant	$ .40	$2.00	$6.50
Blue Bantam	.45	2.25	7.50
Early Bird	.40	2.25	7.50
Early Surprise	.45	2.50	8.50
Early Wonder	.40	2.25	8.00
Extra Early Alaska	.40	2.00	6.50
Long Podded Alaska	.40	2.25	7.50
Mammoth Podded Extra Early	.40	2.25	7.50
Black Eyed Peas	.25	1.50	5.50



California Mammoth

PEAS —Continued

WRINKLED VARIETIES

Glacier A new hybrid pea developed to meet the needs for a variety somewhat earlier than Thomas Laxton, but of the same general type and also fully resistant to Fusarium wilt. The vines are dark green and medium heavy; pods single, dark green, blunt ended, plump and well filled with seven to eight deep green, semi-round peas of excellent quality. In growth it very closely resembles the Thomas Laxton, which is one of the parents of the new hybrid, and it carries the very excellent quality and hardiness of the Thomas Laxton variety but is several days earlier. Under normal crop conditions, the vines range between 30 and 34 inches in length, depending upon the growing conditions and come into picking condition between 57 and 60 days.

Laxtonian This is one of the finest dwarf early peas. The vines grow 18 to 20 inches high and produce an enormous crop of dark green pods as large as Gradus, maturing a few days ahead of this variety.

California Mammoth Medium early profuse bearer of large handsome dark green pointed pods. Can be very profitably grown by commercial growers and home gardeners as a succession to Early Bird and the Laxtonian types.

Alderman One of the best long vined, main crop varieties. Hardy, prolific, producing vines 3½ to 4 feet in length. Pods large, pointed, dark green in color. Maturing about the same time as the Admiral Dewey.

Gradus or Prosperity One of the best second early, long-strawed, wrinkled varieties. Produces long pointed pods, well filled and of fine table quality. Vines from 2½ to 3 feet in length. Considered one of the most desirable for the market garden or home use.

No. 95 Icer Very productive 2-foot vines, pods dark green and pointed, averaging 4¾ inches long. Five days later than Gilbo. A high quality type developed in the West for shipping; hence the name "Icer."

Potlatch Strong, vigorous vines of even growth, 20 to 24 inches in height, with luxuriant dark foliage, bearing pods medium green in color, 3½ to 4 inches in length. Broad and pointed at the ends. No variety known will produce more pods, and no pods could possibly shell out better. The Potlatch is a variety from which everyone may expect great things. Fit for table use 61 days from planting. Seed green, wrinkled, large in size.

Thomas Laxton This variety is of the same growth as that of the Gradus, but is usually three to four days later for market. The pods are square at the ends instead of having a long, sloping point, and considered by some to be of a better flavor than the Gradus.

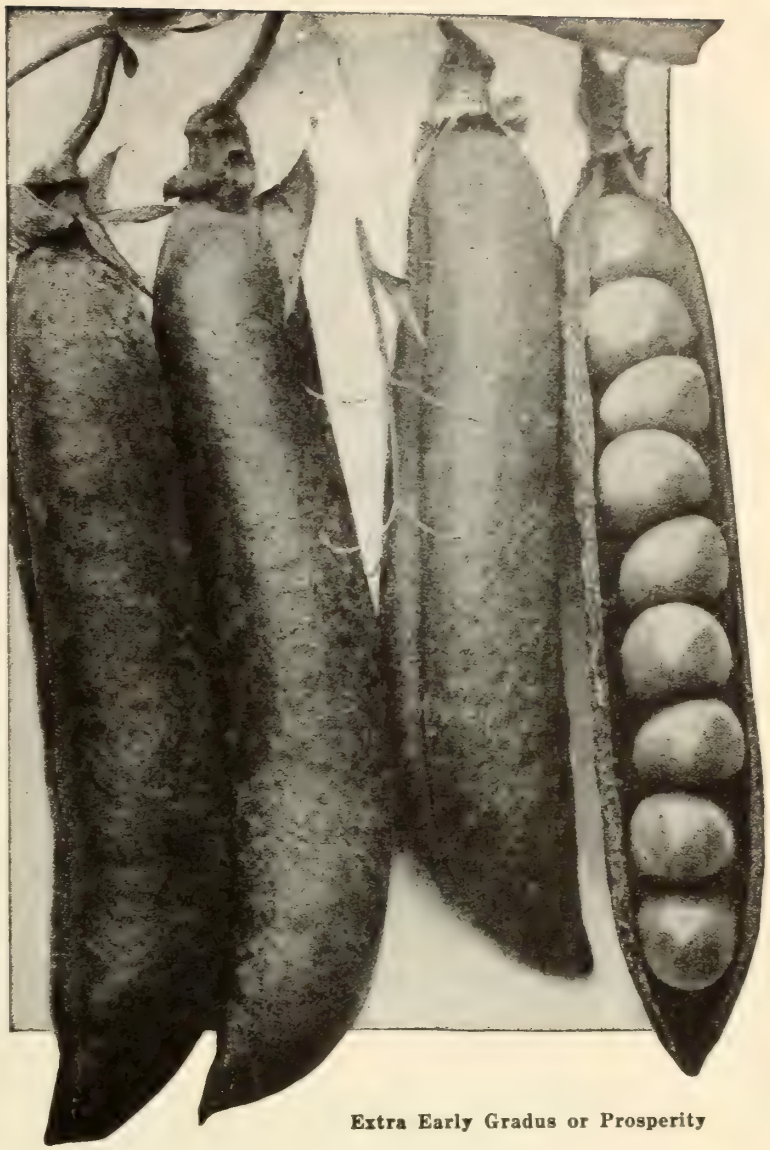
Daisy, or Dwarf Telephone A second early, of robust but remarkably even growth. From 16 to 18 inches high. The stout plants are fairly loaded with large, bright green pods. Each pod contains from 7 to 9 large peas of a light bright green color, tender and well flavored.

EDIBLE PODDED PEAS

Mammoth Melting Sugar This is by far the largest and finest of the true sugar or edible podded Peas.

PEANUTS

Virginia Bunch Earliest, most prolific and easiest cultivated variety. Lb., 15c; 10 lbs., $1.35.



Extra Early Gradus or Prosperity

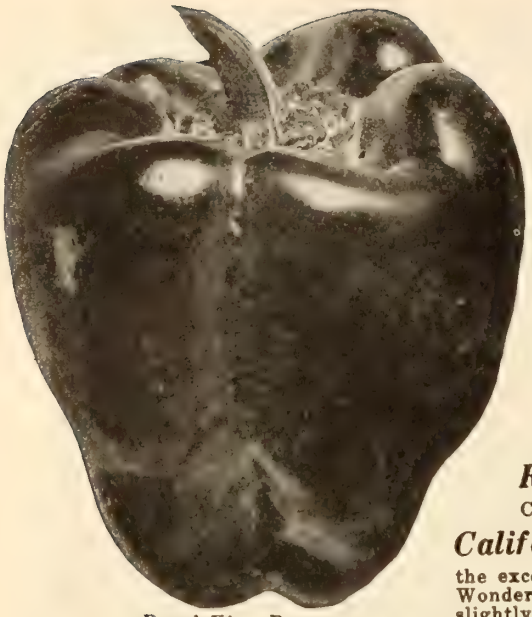
Dark Green Telephone A tall-growing, late sort, 3½ to 4 feet in height, having beautiful dark green pods of very large size, containing 6 to 7 large peas of delicious flavor. Continues in bearing for quite a long time.

PRICES	Qt.	Pk.	Bu.
Alderman—Wilt resistant	$ .40	$2.25	$7.50
California Mammoth	.40	2.25	7.50
Dark Green Telephone—Wilt resistant	.40	2.25	7.50
Dwarf Telephone—Wilt resistant	.40	2.25	7.50
Glacier	.40	2.50	8.50
Gradus or Prosperity	.40	2.25	7.50
Laxtonian	.40	2.25	7.50
Laxtons Progress	.40	2.25	7.50
Mammoth Melting Sugar	.50	3.00	10.00
Morses Market	.40	2.25	7.50
No. 95 Icer	.40	2.50	8.50
Potlatch—Wilt resistant	.40	2.25	7.50
Thomas Laxton	.40	2.25	7.50

PEPPERS

1 oz. to 1,500 plants.

Peppers should be sown either indoors or in hotbeds early in April and transplanted to the permanent beds when about 3 inches high in two foot drills and two feet apart in the drills. The seed can also be sown in open ground when danger from frost is past but the crop will naturally be much later. A top dressing of fertilizer or poultry manure well mixed with the soil when the plants are about 6 inches high will materially aid in the production of a big crop.



Royal King Pepper

Royal King Plants grow about 2½ feet high, and are vigorous; compact and very productive, commencing to bear very early and continuing until killed by frost. The fruit is very large, bright and glossy and the extremely thick flesh is sweet and mild. They will stand distant shipping and hold up well for market as they do not wilt nor become ripe near so quickly as other large varieties. This strain is extensively grown in the South by large shippers and deserves the attention of every trucker and home gardener.

King of the North The earliest large pepper in cultivation. The plants are very uniform in growth, dwarf and compact, and very productive. Fruits, mild and sweet, with medium thick flesh.

Ruby Giant A variety of Mango Pepper which is of a desirable size and shape for stuffing. A cross of Ruby King and Chinese Giant. Grows to large size and is very mild.

California Wonder Its large, smooth, extremely heavy, very mild, thick flesh, make this variety truly a wonder. Combining the excellent quality of the Pimento and the size of Crimson Giant, California Wonder is being grown for all purposes. Plants are sturdy, productive and slightly spreading, bearing five to nine large glossy fruits to a setting, averaging one-half pound each. Deserves the attention of every pepper grower.

Pimento or Perfection A medium early, prolific, perfectly mild variety with extremely thick flesh. On account of its thick flesh it will hold up for a long time, and is an excellent sort for canning whole.

Chili, Small Red conical pod, about 2 inches long, very hot. Fine for pepper sauce and seasoning.

Cherry Red Fruit small, round, color rich scarlet, very hot.

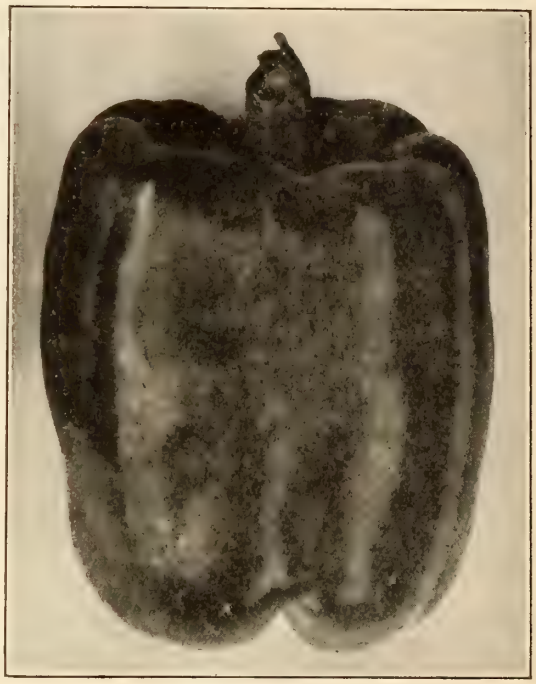
Chinese Giant This desirable variety is one of the largest sweet peppers ever offered. The flesh is quite thick, very mild and remarkably sweet.

Large Bell, or Bull Nose This large, early and productive sort has the most pungent flavor of all the large peppers. Thick flesh.

Long Red Cayenne The pods are long and slender; bright red color and very pungent. This is an old-time favorite and is used extensively for bunching with pot-herbs.

Oakview Wonder Slightly smaller than California Wonder, but a week earlier and more prolific.

World Beater or Sweet Mountain This splendid pepper is a cross between Chinese Giant and Ruby King, and combines the size of one and the earliness of the other. It is exceedingly mild, very large and the color good. The flesh is very thick, making distant shipment possible.



California Wonder

Chinese Giant Pepper

Pepper Plants

In All The Leading Varieties. FRESH DAILY. **See Page 39.**

PRICES	Pkt.	Oz.	¼ Lb.	Lb.
California Wonder	$ .10	$ .30	$1.00	$3.50
Cherry Red	.10	.30	1.00	3.50
Chili, Small	.10	.30	1.00	3.75
Chinese Giant	.10	.40	1.25	4.00
Half Long Narrow Cayenne	.10	.40	1.25	4.00
King of the North (Early)	.10	.40	1.35	5.00
Large Bell, or Bull Nose	.10	.30	.85	3.00
Long Red Cayenne	.10	.30	1.00	3.50
Mammoth Golden Queen	.10	.30	1.00	3.75
Oakview Wonder	.10	.40	1.35	5.00
Pimento or Perfection	.10	.30	1.00	3.50
Royal King	.10	.35	1.00	3.50
Ruby Giant	.10	.40	1.35	5.00
Sunnybrook or Cheese	.10	.30	1.00	3.50
World Beater or Sweet Mountain	.10	.25	.75	2.75

PARSNIPS

1 ounce to 150 feet of drill.

Parsnips are well known as a delicious table vegetable but their value for the purpose of feeding cattle and stock is but little appreciated. The parsnip is rich in saccharine food which adds greatly to the richness of the milk when fed to cows, while the fresh, succulent roots increase the flow of milk as greatly as does the use of fresh, green food in the spring. It is especially valuable for the purpose from its extreme hardiness, as the roots can be left in the ground all winter and improve in quality by the continued freezing.

Special Hollow Crown

A specially selected stock, developed for uniform well-shaped smooth roots of excellent quality.

Hollow Crown Parsnip

PUMPKINS

1 ounce to 15 hills; 4 pounds per acre, in hills 10 by 10 feet apart.

CULTURE.—Sow in good soil in May, when the ground has become warm, in hills 8 to 10 feet apart each way, or in fields of corn about every fourth hill; always avoid planting near other vines, as they will hybridize.

Sugar Pie Pumpkins This is the best of all Pumpkins for pies. The fruit is small to medium in size, flesh solid and fine grained, the seed cavity small, and it is a splendid keeper.

Cushaw, or Crookneck One of the most popular varieties to grow for pies as well as for stock feeding. Fruits 2 feet in length, with long, solid neck, most frequently curved in form; seeds are located in the lower bulb-like end. Skin striped with mottled bands of creamy white. Flesh rich, creamy yellow, tender and of exceptionally fine flavor.

Sweet Potato Excellent for pies, pear-shaped, medium sized, flesh and skin creamy white, fine grained, sweet and delicious; first-class keeper.

Japanese Pie Crookneck variety, with extremely small seed cavity; nearly all solid meat; quality extra fine; seeds distinct in appearance, being curiously sculptured in the manner of Chinese letters. Productive, ripens early, medium size, good keeper.

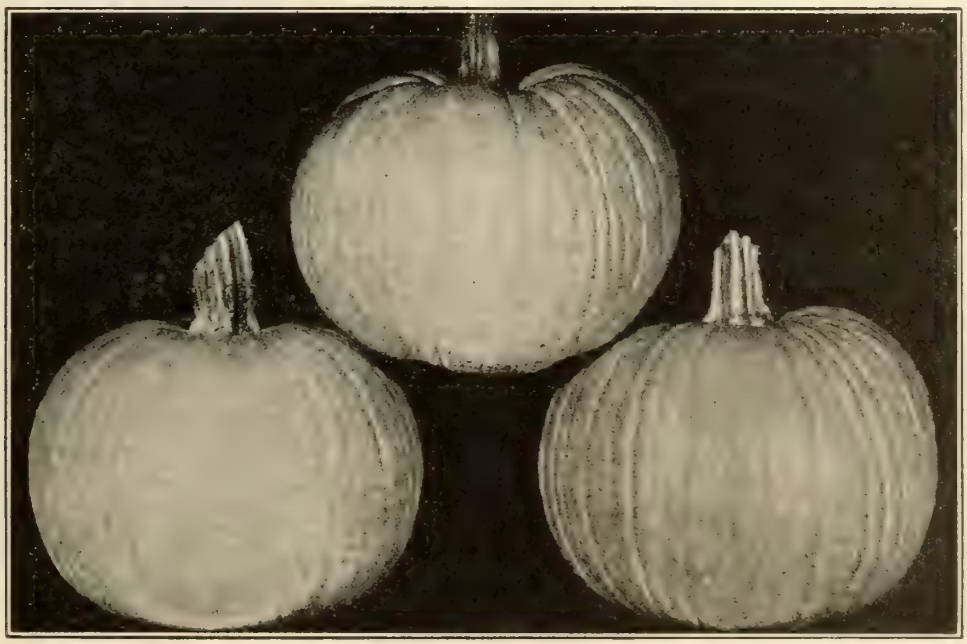
King of Mammoths This giant variety grows to enormous size. Deep yellow, glossy color. Splendid to grow for stock and exhibition purposes.

Squash Pumpkin—Boston Marrow

See Squash, Page 33.

PRICES

PARSNIPS	Pkt.	¼ Lb.	Lb.	10 Lb.
Special Hollow Crown	$ .10	$ .25	$ .75	$6.50
Manns New Market Garden Strain	.10	1.00	3.50	. . .
PUMPKINS				
Connecticut Field	.10	.20	.50	4.50
Cushaw, or Crookneck	.10	.25	.90	8.00
Japanese Pie	.10	.25	.75	6.50
King of Mammoths	.10	.25	.75	6.50
Quaker Pie	.10	.30	.90	7.50
Sugar Pie Pumpkins	.10	.25	.75	6.50
Sweet Potato	.10	.25	.75	6.50



Sugar Pie Pumpkin

RADISHES

1 oz. for 100 feet of drill; 9 lbs. per acre.

Extra Early Scarlet Globe Outdoor Forcing

Light, sandy soil, rich in organic matter is essential to produce crisp and tender radishes. For an early crop sow the seed as soon as the ground can be worked, in drills 6 to 10 inches apart, covering the seed half an inch deep. When the plants are well started, thin out to one inch apart in the drills. Frequent watering in dry weather is very beneficial as high quality is largely dependent upon rapid growth. For a continuous supply, successive plantings should be made at intervals of 10 days to two weeks, selecting varieties best suited for the season.

Extra Early Scarlet Globe No. 8

From Specially Selected Transplanted Roots

A reselected strain so uniform in its maturity that each sowing can be entirely gathered and bunched at one pulling, with practically no waste. This means more bunches per row, more time saved in bunching, and the ground ready for the next crop a week earlier. This equalized maturity also permits sowing this crop between rows of beans, corn, etc., as a "catch crop." This is the market gardener's favorite as a forcing Radish, very early; mild and crisp, juicy and tender; ample top, will stand heat without becoming pithy. One of the best selling and most attractive Radishes on account of its bright scarlet color and handsome shape. Our stock of this is the very best, selected with special care as to size, shape, color and earliness, and market gardeners will find it a money maker, as it is just right in every respect. **Pkt., 10c; ¼ lb., 25c; lb., 75c; 10 lbs., $6.00; 25 lbs., $13.50; 100 lbs., $50.00.**

Greenhouse Scarlet Globe This strain has been especially bred to meet the very exacting requirements of greenhouse cultivation, producing quickly a highly marketable crop of uniformly shaped radishes of fine quality.

Comet Distinctly a round or ball shaped sort of longkeeping quality, medium tops when grown outdoors. 1935 All-American winner.

Crimson Giant A variety combining earliness and great size. It grows much larger than other extra early varieties, but does not become pithy even when fully twice as large in diameter and a week older; beautiful crimson-carmine; turnip-shaped; flesh firm, crisp and tender. We recommend it for outdoor garden planting as well as for greenhouse forcing.

Sparkler (Round White Tipped) One of the most attractive of the Turnip Radishes for early planting outdoors. Color very deep scarlet with 1/3 white at the tip; flesh white and of the best quality.

Perpetual White Summer This variety introduced by us, has given splendid satisfaction to all who have tried it. They are pure white, of uniform good quality, crisp and brittle, and they keep longer in a fit condition for the table than any variety we know of, hence their name. Perpetual White Summer can be sown any time of the year, and will always produce good radishes fit for market earlier than the Chartier, and keeps in perfect shape for marketing about four weeks, or longer for home use.

White Stuttgart Quick growing and therefore very early. Of the largest size, and both flesh and skin are pure white; quality fine, firm, and brittle. Can be pulled for use at any stage.

New White Strasburg A very new desirable summer variety, a favorite with our market gardeners. Skin and flesh both white. It is excellent quality and a quick grower.

	PRICES				
	Pkt.	¼ Lb.	Lb.	10 Lb.	100 Lb.
Comet	$ .10	$ .25	$ .75	$6.00	$50.00
Crimson Giant	.10	.20	.60	5.00	40.00
French Breakfast	.10	.25	.75	6.00	50.00
Greenhouse Scarlet Globe	.10	.25	.75	6.00	50.00
Half Long Black Spanish	.10	.25	.75	6.00	50.00
Long Black Spanish	.10	.25	.75	6.00	50.00
Long Scarlet	.10	.20	.60	5.00	40.00
Perpetual White Summer	.10	.25	.75	6.00	50.00
Philadelphia White Box	.10	.20	.60	5.00	40.00
Round Black Spanish	.10	.25	.75	6.00	50.00
Scarlet Globe	.10	.20	.60	5.00	40.00
Scarlet Globe No. 8	.10	.25	.75	6.00	50.00
Sparkler	.10	.20	.60	5.00	40.00
White Chinese or Celestial	.10	.20	.60	5.00	40.00
White Icicle	.10	.20	.60	5.00	40.00
White Strasburg	.10	.20	.60	5.00	40.00
White Stuttgart	.10	.25	.75	6.00	50.00

White Strasburg

RADISHES (Continued)

Phila. Model White Box (Forcing) It is of most handsome shape, very early and has but few leaves, thus making it of special value for growing in hotbeds or "boxes," and one-third more radishes can be grown in the same space than with most other sorts. It is of clear white color, solid, juicy and unsurpassed in flavor.

Long Scarlet **This is the standard extra early long scarlet market variety, short top, long scarlet roots; crisp, fine flavor.**

White Icicle Radish **It fully equals in crisp, tender flesh and mild flavor the popular White Vienna or Lady Finger, while it is as early as Long Scarlet Short Top. Planted in spring the young Radishes are ready for use in 20 to 25 days from sowing the seed, and their long, slender form and pure paper-white skin are most attractive when bunched for market.**

White Icicle

WINTER VARIETIES

Long Scarlet

White Chinese or Celestial

Large. stump-rooted Radish with white skin and flesh. Can be sown from July 1 to August 15, and will keep in prime condition, mild in flavor, brittle, and never woody. Market gardeners will find this a special seller.

Improved Half-Long, Black Spanish Radish **This new sort is intermediate in shape between the Old Round and Long Black Spanish, and much superior to either. Flesh mild, very sweet and crisp, never pithy, and is decidedly the best of all black radishes. If stored in damp sand in the cellar, they will keep all winter.**

Round Black Spanish **Like the Long White Spanish, except in shape.**

Long Black Spanish **Black skin, white flesh, very firm and solid, good keeper, grows long and large.**

RHUBARB or Pie Plant

Sow in April or May, in drills 1 foot apart; when 3 or 4 inches high, thin out in rows 6 to 10 inches apart. Transplant the ensuing fall or spring in rich soil. Set out the roots 3 to 4 feet apart each way; the following spring it will be fit to use.

Victoria Very large, the finest cooking variety.

RHUBARB ROOTS—See Page 39.

SORREL

BROAD AND NARROW LEAVED

A hardy plant grown for its leaves, which are used as boiling "greens" or salad. Seed should be sown thinly in drills early in spring. When well started thin out to stand 4 to 6 inches apart in the row. The leaves can be gathered for use at any time after the plants are well started in growth, and the roots will continue to produce a further supply. The plant is entirely hardy, and, starting into growth early the following spring, will afford a large supply of fine "greens" quite early.

SALSIFY

OR OYSTER PLANT

1 oz. for 50 feet of drill.

Requires a well enriched, mellow soil, which, previous to sowing the seeds, should be stirred to a depth of 18 inches. Sow early in the spring in drills 15 inches apart; cover the seed with fine soil 1½ inches in depth, and when the plants are strong enough thin out to 6 inches apart. As the leaves resemble grass, be careful they are not mistaken for it when weeding.

Mammoth Sandwich Island A new and improved type, producing roots of nearly double the size and weight of the old varieties; mild and delicately flavored.

PRICES

	Pkt.	¼ Lb.	Lb.
RHUBARB			
Victoria	$ .10	$ .40	$1.25
SALSIFY			
Mammoth Sandwich Island	.10	.40	1.25
SORREL			
Large-Leaved French	.10	.50	1.50
Narrow Leaved	.10	.50	1.50

Mammoth Sandwich Island Salsify

MAINE GROWN

SEED POTATOES

LET US QUOTE PRICES ON HIGHEST QUALITY SEED ON BASIS OF LOWEST MARKET VALUE

Potatoes will adapt themselves to various soil conditions as easily as most vegetables. A better crop will be produced, however, on a sandy loam which contains a quantity of well rotted vegetable matter. A clover sod, vetches turned under in the fall, or land which was heavily manured for a previous crop supply ideal conditions.

In preparing the seed the eyes should be cut so that the largest part of the surrounding flesh is situated toward the stem end, because the eyes of a potato always have a root system running toward that end and for that reason the sprouts cannot draw moisture from the opposite direction. If the ground you intend to use has produced a scabby crop previously or the seed shows any trace of disease, the pieces should be disinfected as a preventative.

For a very early crop, run off furrows about three feet apart and about four inches deep. Drop the pieces about 15 inches apart in the furrows and cover to a depth of about 1½ inches, gradually filling in the furrows to level as the vines grow larger. For main crop it is just as well to cover the eyes with four inches of soil at once. If fertilizer is used, apply it either in the row or broadcast before planting and be sure that it is thoroughly mixed with the soil so that the seed is not burned. Fresh stable manure will cause the potatoes to become scabby.

Just before the sprouts have appeared above the ground run a light harrow over them to kill the weeds and break up the crust. Continue weeding and harrowing until there is danger of breaking off too many sprouts. Cultivate thoroughly and frequently, being careful not to cut any of the roots, continuing until the vines have attained full growth and begin to spread.

Spraying for insects and blight is very necessary. Red River Potato Mix will give very satisfactory results in controlling insects and diseases.

The size and quality of the crop and the ability to resist disease is directly dependent upon the seed planted and no amount of cultivation or attention will offset the uncontrollable results of poor seed. Be sure of your crop and plant only the best Maine grown seed potatoes.

Chippewa Growers who planted this new variety last spring are more than pleased with its increased yield, better quality and greater sales appeal. It is a heavy yielder, of medium size, very uniform, round to oblong, somewhat flattened, eyes shallow, skin is smooth clean white.

Red Bliss, or Bliss Triumph This variety is rapidly growing in favor. The tubers are round and uniform in shape, eyes slightly depressed and of a beautiful bright red color, very hardy and vigorous, maturing with extra earlies.

Maine Certified Cobblers Planted, grown and shipped under the extremely rigid requirements of the Maine Dept. of Agriculture, assuring finest quality clean seed, free from disease, uniform in size, true to type and from highly productive strains.

No. 2 Size Cobblers (Out of certified.) Most economical to plant and equally productive as No. 1 size seed.

Irish Cobbler The biggest Potato and greatest producer known among the first early varieties. It will outyield all other early kinds and equal most of the later varieties. Fine quality, color a pure, creamy white, shape round to oblong and smooth. Vines very stocky, with dark foliage.

Early Rose For a generation the standard Potato of the whole country for earliness, yield, thrift, beauty and table qualities, because it always succeeds well in any soil. Our stock is strictly pure.

Green Mountain White skin, flat, oval form, smooth, of good appearance; excellent table quality. Ripens slowly, and is a good keeper. Valuable for late crops. Now taking the lead in all markets.

Increase Your Profits
spray with
RED RIVER POTATO MIX

Dakota Red This very popular local variety has gained favor due to its very productive and fine cooking qualities. It often brings a higher price in Baltimore markets than the most fancy table stock from New York and Maine. Used for late crop only. Let us quote.

Michigan Russet Rapidly gaining popularity in Maryland due to excellent quality and exceptionally high yield. We offer specially selected seed.

SEED SWEET POTATOES

Elzey's Improved The strain used every year by Maryland's most successful sweet potato growers. Yields 25 to 50 per cent more marketable stock and sells higher than any other. Dry and sweet; decidedly the best of all. Prices subject to market fluctuations. Let us quote.

Sweet Potato Plants See Page 39.

Semesan Bel

This instantaneous dip treatment for both white and sweet potatoes is fast replacing all formerly practised methods of seed potato disinfection. Semesan Bel exerts an invigorating effect upon plant growth by removing disease handicaps and repelling the attacks of soil-borne organisms so that yields are greatly increased. Ask for Semesan Bel booklet. 1 lb. treats 16 to 22 bushel. Prices—1 lb., $1.50; 5 lbs., $6.75.

Green Warted Hubbard

Golden Summer Crookneck

Boston Marrow

SQUASH

1 oz. of bush sorts to 40 hills; large seeded 15 hills.
2 lbs. of bush sorts to acre; large seeded 3 to 4 to acre.

Squashes, like other vines, are partial to a light, dry, rich soil. Plant the running varieties in hills 10 feet apart each way; thin out to three plants in a hill. Cultivate frequently until the vines commence running, after which do not work the soil deep.

Boston Marrow (or Squash Pumpkin) The fall and winter variety most widely used for canning and for pies. Fruits oval, pointed, deep orange color, weight 6 to 8 lbs. Very productive. (98 days.)

Cocozelle Extra Long Italian Produces dark green fruit about 20 inches long and 3 to 4 inches in diameter; very straight, striped when mature.

Early Prolific Straightneck Produces an abundance of ten inch fruits in a week after blossoming. Very prolific, exceeding all other varieties in early production. Color, lemon-yellow. Vine about half the size of other varieties which permits close planting. An ALL AMERICAN Selection. (50 days.)

Green Delicious (Winter) Top shaped, 7 to 8 pound fruits with orange flesh of excellent quality. Requires 100 days.

Green Tinted Bush Scallop Preferred by many market gardeners by reason of true decided light green color, even when fully matured.

Golden Summer Crookneck A superior strain of summer crookneck, heavily warted, of a very deep orange color, 9 inches long, of excellent quality and highly productive.

Golden Hubbard Resembles Boston Marrow somewhat in shape and size; more densely warted, flesh deep orange, dry and of fine quality. Good keeper. (100 days.)

Green Warted Hubbard Manns' strain is densely warted, much larger than Golden Hubbard; flesh exceptionally thick, deep orange, dry and of excellent quality. (105 days.)

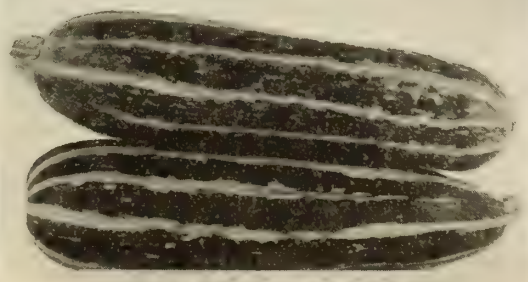
Table Queen or Acorn (New Mammoth Type) Dark green, thin shelled, smooth, ribbed fruits with yellow flesh; favorite variety for baking. (58 Days.)

Green Tinted Bush Squash

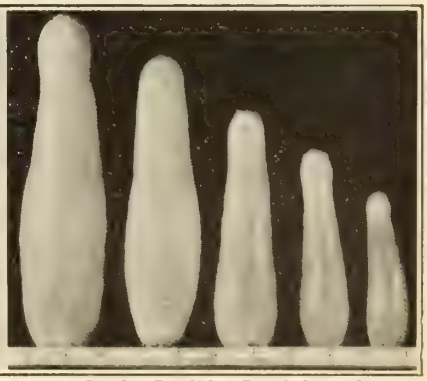
PRICES

	Pkt.	¼ Lb.	Lb.
Boston Marrow (10 lbs. $3.50)	.10	.20	.50
Cocozelle, Extra Long Italian	.10	.30	1.00
Early Prolific Straightneck (new)	.15	.50	1.50
Giant Summer Straightneck	.10	.25	.75
Golden Hubbard	.10	.30	.85
Golden Summer Crookneck	.10	.30	1.00
Green Delicious	.10	.30	1.00
Green Tinted Bush Scallop	.10	.25	.75
Green Warted Hubbard	.10	.30	1.00
Jersey White Bush Scallop	.10	.25	.75
Number 14	.10	.60	2.00
Table Queen (Mammoth)	.10	.30	1.00
Vegetable Spaghetti	.10	.25	75
Zucchini (Extra Dark)	.10	.50	1.50

Table Queen



Cocozelle



Early Prolific Straightneck

SPINACH

1 oz. to 100 ft. of drill; 12 to 15 lbs. per acre.

OUR IMPROVED STRAINS ARE GROWN BY THE ORIGINATORS AND WHEN BETTER QUALITY IS PRODUCED WE ARE ALWAYS AMONG THE FIRST TO OFFER IT.

One of the most staple vegetables of the American table, possessing highly valuable and health giving qualities; easily grown, requiring but little attention and in sections where the soil is rich, very profitable crops are produced.

Select a rich piece of ground, the richer the better; and for late spring and early summer use, sow the seed during February, March and April in drills one foot to 20 inches apart, one-half to one inch deep. When the plants are well started thin out to 4 to 6 inches apart, or sow the seed thinly and allow all the plants to stand.

For winter and early spring use, sow either in drills or broadcast during August, September and October. A top dressing of Nitrate of Soda will make a vast improvement in the earliness, size and quality of the crop.

Manns' Extra Dark Green Savoy

Old Dominion A later seeding type of Virginia Yellows Resistant Savoy which stands 12 to 15 days longer, having about the same season of growth as our Extra Dark Green Savoy. With old Dominion it is now possible to successfully grow an early spring crop on diseased soil, where it was previously necessary to take chances with the early seeding character of Virginia Blight Resistant.

Manns' Extra Dark Green Savoy As with other important introductions of new strains having real merit, we are among the first in America to offer this improved type of Bloomsdale Savoy. It is only about two days later than Reselected, but the plants are larger, less liable to bolt to seed, more heavily crumpled and of more upright growth. The very dark green color, however, is its chief advantage and in making the selections for this deep color the plant breeder has also improved the strain in its savoyed characteristics and absolute freedom from smooth leaved plants.

Manns' Reselected Bloomsdale Savoy

This strain has been developed in response to the urgent demand on the part of large spinach growers for an improvement in the quality of the regular commercial Bloomsdale grown in Holland.

The plants are large, heavy, uniform and in every way especially re-selected to match the ideal Bloomsdale Savoy type.

Virginia Blight Resistant Bloomsdale

A strain of Bloomsdale Savoy especially developed by the Virginia Experimental Station for the purpose of resisting the disease commonly called yellows. Used extensively in the vicinity of Norfolk and in other sections where blight is encountered.

Being an American sort, it matures very quickly and is therefore preferred by some growers for early Fall sowing. Our seed is grown from thoroughly reliable, genuine Virginia Blight Resistant stock.

PRICES	Lb.	10 Lbs.	25 Lbs.	100 Lbs.
Extra Dark Green Savoy	$ .20	$1.80	$4.25	$15.00*
Giant Smooth Leaved	.25	1.90	4.25	15.00*
Harlem Market	.25	2.25	4.90	17.50*
Juliana	.25	1.90	4.25	15.00*
Long Season	.25	1.90	4.50	16.00*
Long Standing Savoy	.25	1.90	4.50	16.00*
Old Dominion Blight Resistant	.25	2.00	4.75	17.00*
Presto Savoy	.25	2.25	4.90	17.50*
Reselected Bloomsdale Savoy	.20	1.80	4.25	15.00*
Special Summer Savoy	.25	1.90	4.50	16.00*
Victoria	.25	2.20	4.75	17.00*
Virginia Blight Resistant	.25	1.90	4.50	16.00*

*Cash Discount, $1.00 per 100 lbs.
*½ Ton Lots, deduct $1.00 per 100 lbs.

	Pkt.	Oz.	¼ Lb.	Lb.
New Zealand	$ .10	$ .15	$ .25	$ .75
Southland Summer	.10	.15	.25	.75

Manns' Special Summer Savoy

Holland Field of Early Long Standing Savoy for Seed

Manns' Early Long Standing Savoy Nearly as early as reselected savoy but has the very valuable advantage of standing in perfect condition, without bolting to seed, 10 to 14 days longer than other varieties. This feature is worth thousands of dollars to spinach growers, for with this variety it is possible to market the crop when it is convenient and advantageous for the grower to do so. Many severe losses have been incurred because cutters were not available, weather conditions unfavorable, or prices were too low, but Early Long Standing will wait for cutters, for weather, and for prices.

Long Season Very successfully grown for supplying local markets during warm weather when other varieties have gone to seed. The beautiful large plants are in prime condition in about 50 days and remain marketable for 15 to 20 days. Somewhat earlier than Juliana and producing extremely dark glossy green leaves, thoroughly savoyed, thick and firm in texture.

Princess Juliana Greatly resembling savoy as the picture opposite will show; much slower in growth, however, and very late in going to seed. The ideal variety for late spring sowing, as it thrives well in warm weather and is in great demand as long as the weather permits shipping.

Giant Smooth Leaved The most popular variety in Holland for home use and largely used by Western packers of fancy canned goods because of its excellent quality and very dark green color. The flat, extremely heavy leaves do not ship well but are ideal for the grower who contracts by weight.

Southland Summer New special strain of Swiss Chard more closely resembling real spinach, producing large heavily crumpled leaves of a bright green color. Will eventually replace New Zealand.

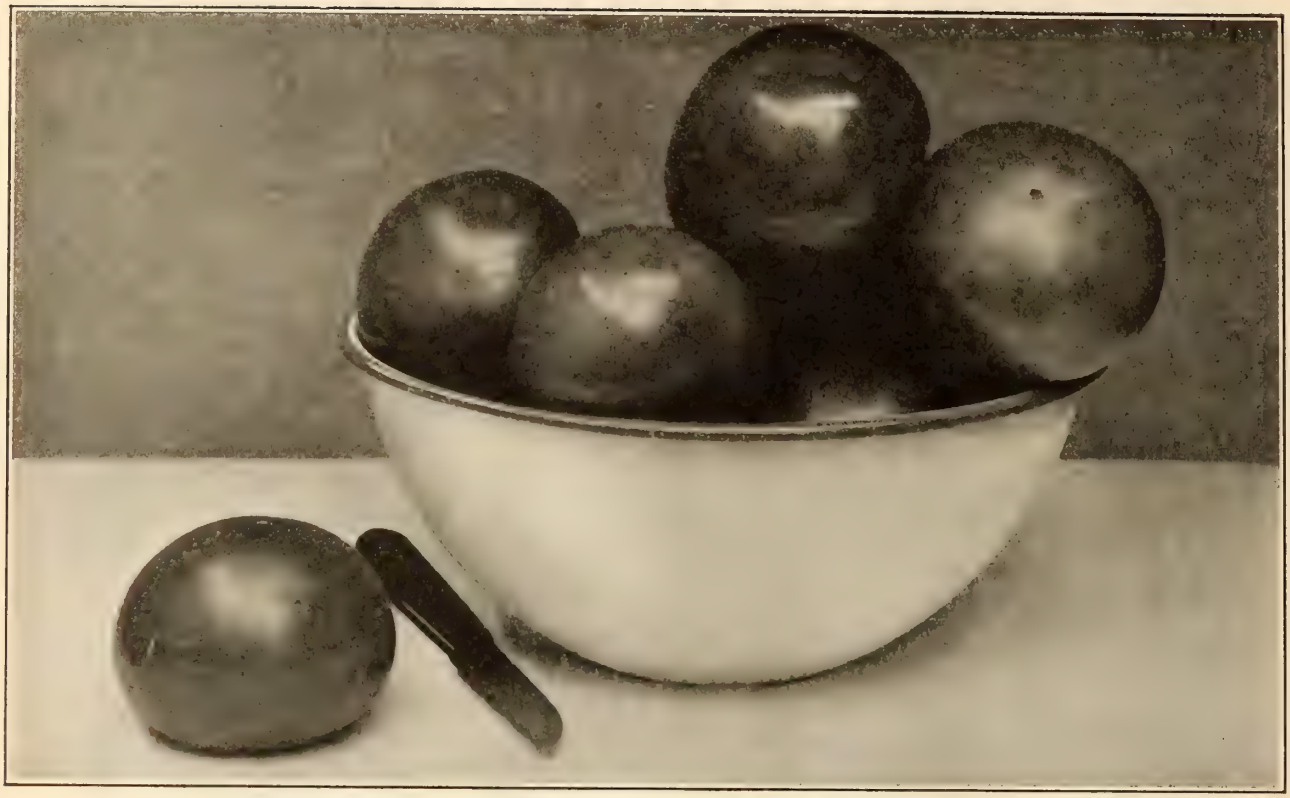
New Zealand (TETRAGONIA EXPANSA) Not related to regular spinaches but forming larger spreading plants producing fleshy brittle tips and leaves which are used as spinach. Of delightful flavor and practically everbearing.

Manns' Presto Savoy Leaved A new prickly seeded variety possessing outstanding merits over the Roundseeded Bloomsdale, which it resembles identically. Presto is the earliest and quickest growing sort of spinach. It is much hardier than any other variety and will stand cold and unfavorable weather conditions where round seeded sorts will decay and wilt. In addition to this it shows a remarkable resistance against blight, which is a hereditary property in the parent stock, from which it originated.

Manns' Special Summer Savoy Stands warm weather without bolting to seed better than any other Savoy leaved type. A great improvement even on Bloomsdale Long Standing. Very dark green and heavily crumpled leaves.

Manns' Old Dominion, 35 days after sowing, grown by Mr. Clarence Shallcross, near Philadelphia.

LET US QUOTE NITRATE OF SODA AND FERTILIZERS



Manns' Improved Advance

TOMATOES

1 oz. to 2,000 plants; ¼ lb. per acre.

All our tomato seeds are grown from stocks, exclusively for seed purposes, by the originators, experienced growers and experts. We are fully convinced of the merit of all new varieties before placing them in our catalog, and therefore strongly recommend our strains as being absolutely reliable.

For early, the seed should be sown in hotbeds during February or the first week in March, in drills 5 inches apart and half an inch deep. Later sowing may be made until the last of April. When the plants are 3 or 4 inches high they should be set out 4 or 5 inches apart in another hotbed or cold frame, or removed into small pots allowing a single plant to the pot. Expose to the air as much as possible to harden. Water freely at time of transplanting, and shelter from the sun a few days until the plants are established. Cultivate thoroughly as long as the vines will permit, but the last two or three workings should be very shallow or the crop may be badly injured, especially if the cultivator is run too near the plants.

Extra Early Varieties

Improved Advance An extra early, large tomato of high quality, round or slightly flattened shape, and exceptionally smooth for such an early variety. As early and hardy as Earliana and yielding more fruit both in the first and subsequent pickings. It is more shapely, more free from cracks and shows less green about the stem than other extra early sorts. With Improved Advance the grower can produce a crop which will stand superior in appearance and quality, in competition with the other extra earlies and command the fancy prices of an early market.

Break O'Day Dr. Fred J. Pritchard of the U. S. Dept. of Agriculture describes his new creation as follows: "Very productive, early variety, highly resistant to wilt and somewhat resistant to blights. Fruits large, smooth, meaty, red, globular."

Scarlet Dawn Winner of a Gold Medal in the 1934 All American Trials. This hybrid of Clark's Early and Marglobe has the shape and structure of Marglobe, but a brighter scarlet color. It is earlier than Bonny Best and yields as heavy as Break-O'Day. Excellent shipping quality as well as being desirable for home growing.

PRICES

	Pkt.	Oz.	¼ Lb.	Lb.
Bonny Best Certified	$ .10	$ .35	$1.25	$4.00
Break O'Day	.10	.30	1.00	3.50
Earliana	.10	.30	1.00	3.50
Early Detroit	.10	.30	1.00	3.50
Enormous	.10	.40	1.25	4.00
Glovel	.10	.40	1.35	5.00
Greater Baltimore (Ind.)	.10	.30	.90	3.00
Grothens Globe	.10	.40	1.35	5.00
Improved Advance	.10	.50	1.75	6.00
Marglobe Special	.10	.30	1.00	3.50
Market Champion	.10	.30	1.00	3.50
Maryland Pride	.10	.40	1.25	4.50
New Deal	.10	.75	2.50	7.50
No. 600—"Red Ponderosa"	.10	.40	1.35	5.00
Oxheart	.10	.45	1.35	5.00
Penn State	.10	.40	1.35	5.00
Ponderosa	.10	.50	1.50	5.00
Pritchard (Certified)	.10	.40	1.00	3.50
Rutgers (Certified)	.10	.40	1.25	4.00
Scarlet Dawn	.10	.45	1.35	5.00
Scarlet Topper (Certified)	.10	.40	1.00	3.50
Sensation	.10	.40	1.35	5.00
Stone (Improved)	.10	.25	.75	2.50
Pear Shaped Red	.10	.30	1.00	...
Pear Shaped Yellow	.10	.30	1.00	...
Yellow Plum	.10	.30	1.00	...

Manns' Marglobe Special

TOMATOES

Second Early and Main Crop Varieties

Rutgers Developed under the direction of Prof. L. G. Schermerhorn of the New Jersey Agr. Experiment Station. The fruits begin ripening at the center, are highly colored throughout and have a thick wall structure with very small seed cavity. In comparison with Marglobe they are slightly more flattened at the stem end and will average much larger. Very prolific and desirable for canning, market or the home garden. (Certified Stock.)

Indiana Baltimore Large, smooth, solid, bright scarlet; second early Tomato; a prolific bearer and fine shipper.

Manns' Improved Stone This variety has attained great favor with canners and market gardeners everywhere. Its solidity and carrying qualities are remarkable. Its color is a desirable red; in shape perfectly smooth, and thicker from stem to blossom end than most varieties, making it most handsome and salable.

Marglobe Special Our stock of this extremely popular variety is far superior to the average and we have received many unsolicited testimonials complimenting us on its excellent quality.

It produces heavy yields of large smooth, globular, meaty, red fruits. They have a delightful flavor, and are covered with a thick skin which hinders cracking. Moreover, the plants shade the fruits well and thus protect them from sun-scald.

Scarlet Topper or Pritchard The last introduction of the late Dr. Pritchard and considered by many to be superior to his Marglobe. It is a self-topping disease-resistant sort, heavily productive, of good color and in appearance almost identical to Marglobe. Highly valuable for market garden use, for shipping and packing.

Market Champion A main crop variety possessing all the good qualities to make it ideal for home and market gardeners. Vines large, hardy and productive. Fruits bright scarlet, oval and deep, exceptionally smooth; one of the best of all tomatoes for canning, and a money-maker for the market gardener.

Maryland Pride Since our introduction of it in 1905 it has been grown with great success by canners and market gardeners, who pronounce it "the very best second early and main crop Tomato they have ever grown." The fruit is a beautiful bright red color, magnificent size and handsome, smooth shape. The vines grow vigorously and produce abundantly until killed by frost.

Enormous So named on account of the large size of Tomatoes, which are very solid and smooth.

Ponderosa The largest purple fruited Tomato in cultivation; very solid and of finest quality.

Pritchard, or Scarlet Topper.

RUTABAGAS OR SWEDES

Rutabagas require about four weeks longer to mature than ordinary varieties of turnips, but are more solid, of firmer flesh and therefore keep later into the spring. They are for this reason more desirable for storage, while turnips are better adapted for the early market. Sow during July either in drills or broadcast.

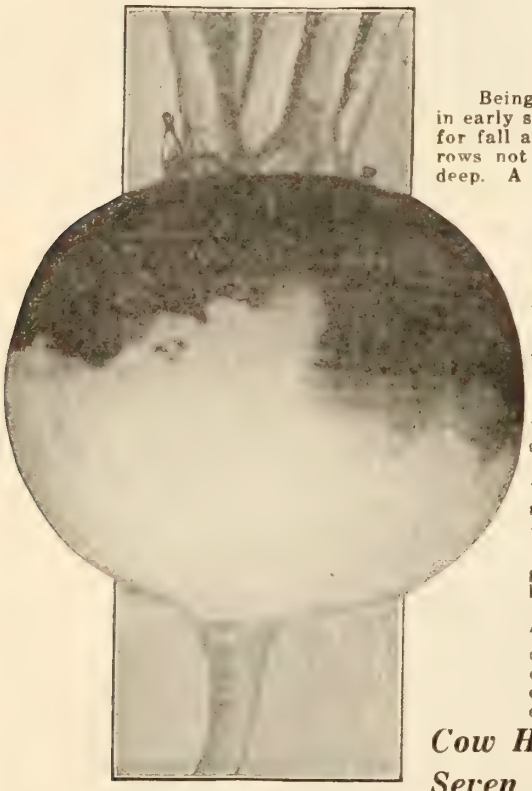
New Canadian Grown for a number of years in the North and held very closely by private individuals, the seed of this variety has always been extremely difficult to procure in a true and reliable type. After three years of searching and checking in our trial grounds, we have found the correct strain and offer it with every assurance that it will soon become the only Rutabaga grown in this section.

Neckless Purple Top Our superb strain of this excellent variety has become a favorite because of its hardy and productive nature. The flesh is sweet and solid, excellent for table use or stock feeding.

Turnip—Autumn King

TURNIPS

1 oz. to 150 feet of drill; 1 lb. per acre.



Purple Top White Globe Turnip

Being primarily a cool weather vegetable, turnips thrive best when planted in early spring or in the fall. For spring crop sow the seed early in April, while for fall and winter use, plantings should be made from July to August. Sow in rows not less than 18 inches apart and one-half to three-quarters of an inch deep. A very popular method, however, is to broadcast the seed between rows of corn or in the cultivated orchard. Proper control of root maggots is effected by rotation of crops, the use of commercial fertilizers instead of manure and the application of Mag-o-tite or other carbolic acid emulsion.

Snowball Pure white all over and perfectly globe shaped. Very early.

Extra Early Flat White Milan An all white flat variety, the earliest of all turnips. Remains in good condition a long time.

Autumn King Sure to become very popular with Market Gardeners; clear yellow with green tinged top, globular and of large size.

Double Duty Grown chiefly for its abundance of tops, surpassing Seven Top in production and quality. Also forms a pure white semi-globe root, which is sweet and tender.

Yellow Globe Orange Jelly One of the best for general crop; flesh firm and sweet; grows to a large size; splendid for table or stock, and keeps well until late in spring.

Purple Top White Globe Also known as Red Top White Globe. This excellent turnip is decidely the most popular variety and more extensively grown than any other. The roots are globular, very handsome and of superior quality; either for table use or stock feeding purposes. It is a heavy producer, early, of rapid growth, and one of the best for winter storage.

Cow Horn Very heavy cropper, a quick grower, most practical for stock feed.

Seven Top This variety is principally planted in the South for the green tops which are produced very abundantly.

FOR GREENS—See Broccoli—Page 8.

PRICES

RUTABAGA	Pkt.	¼ Lb.	Lb.
Neckless Purple Top	$ .10	$ .20	$ .50
New Canadian	.10	.40	1.25
TURNIP			
Autumn King	.10	.20	.50
Cow Horn	.10	.15	.40
Double Duty	.10	.20	.60
Extra Early Flat White Milan	.10	.15	.40

TURNIP	Pkt.	¼ Lb.	Lb.
Extra Early Purple Top Flat Milan	.10	.15	.40
Extra Early Six Weeks	.10	.20	.50
Large White Norfolk	.10	.15	.40
Purple Top White Globe	.10	.15	.40
Seven Top	.10	.15	.40
White Early Flat Dutch	.10	.15	.40
Yellow Globe or Orange Jelly	.10	.20	.50

MANNS' VEGETABLE PLANTS, ROOTS, TREES AND BERRIES

We are large producers of the following plants and can fill orders daily with fresh, strong, stocky plants, grown from the best strains of seed. Varieties not grown by ourselves are contracted for with the most reliable and trustworthy plant growers in this section, who, we know from experience, produce only the best plants.

PLEASE NOTE: All plants are quoted f. o. b. Baltimore. On parcel post orders, 15c per 100 must be added for postage and packing. No shipment can be sent into sections having Japanese beetle restrictions.

Let us Quote in Large Quantities

CABBAGE PLANTS, FROST-PROOF.
(Ready in February, March and April.)
35c per 100; $1.50 per 1,000.
Field-grown. (Ready May and June.)
35c per 100; $1.50 per 1,000.

CAULIFLOWER PLANTS. 25c per doz.; $1.50 per 100.

BORECOLE PLANTS. Postpaid, per 100, 75c.

CELERY PLANTS. (Ready in July.)
Golden Plume. Easy Bleacher.
Winter Queen.
75c per 100; $5.00 per 1,000.

EGG PLANTS. 20c per dozen; $1.00 per 100.

LETTUCE PLANTS. (Ready in March, April, September and October.) **50c per 100.**

PEPPER PLANTS. (Ready in May and June.)
20c per doz.; $1.00 per 100.

SWEET POTATO PLANTS. (Ready May and June.)
75c per 100; $4.00 per 1,000.

TOMATO PLANTS. Hotbed grown. (Ready in April and May.) **75c per 100; $4.00 per 1,000.**
Southern field-grown. 75c per 100. $4.00 per 1,000.

POTTED VEGETABLE PLANTS

EGG PLANTS PEPPERS TOMATOES
5c each; 50c doz.; $3.75 per 100.

ASPARAGUS ROOTS

From one to two years may be saved by planting Asparagus Roots instead of seed. Choice, 2-year-old roots, Palmetto and Mary Washington.
$1.25 per 100; $8.50 per 1,000.

HORSERADISH ROOTS. Maliner Kren or Bohemian.
Postpaid, doz., 25c; 100, $1.25.

RHUBARB ROOTS.
Victoria—**$1.00 per doz.; $7.50 per 100.**

FRUIT TREES

APPLES. 4 ft. and up **75c each, $6.50 per 10.** Delicious, Grimes Golden, Hyslop Crab, McIntosh, Jonathon, Smoke House, Stark, Spitzenburg, Stayman's Winesap, Wealthy, York Imperial, etc.

PEARS. No. 1 grade, 11/16 in. and up **$1.00** each. Bartlett, Sickel, Keiffer.

PEACHES. Strong 1 yr. 4 ft. and up **50c each.** Belle of Georgia, Carman, Crawfords Early, Crawfords Late, Elberta, Heath Cling, J. H. Hale, Niagara, Oriole, Shipley Late Red, etc.

CHERRIES. 2 yr. old Budded No. 1, 11/16 in. and up **$1.00 each, $8.50 per 10.**
SWEET—Bing, Black Tartarian, Napoleon, Yellow Spanish.
SOUR—Early Richmond, Montmorency.

PLUMS AND DAMSONS. 5 to 6 ft. **$1.00 each.** Abundance, Burbank, Moore's Arctic, Shrop-Shire Damson.

APRICOTS ON PEACH. Early Golden, 1 yr. 5 to 6 ft. **90c ea.**

QUINCE. Orange, 5/8 in. diameter and up, **$1.25 each.**

NUT TREES

FILBERT. 4 to 5 ft. $1.25 each.

WALNUT. Black, 3 to 4 ft. **$1.00 each.**

SHADE TREES

MAPLE. Silver, 8 to 10 ft., **$2.00**; Norway, 8 to 10 ft. (1¼ to 1½ in. Cal.), **$3.50**, Schwedlers Maple (50 ft.-70 ft.), 6 to 8 ft., **$3.00.**

BIRCH. White, 10 to 12 ft., **$5.50**, Canoe, 8 to 10 ft., **$3.00**; Weeping, 6 to 7 ft., **$4.75.**

TULIP TREE. 8 to 10 ft., **$3.00.**

SYCAMORE. American Planetree, 6 to 8 ft., **$2.00.**

POPLAR. Lombardy, 6 to 8 ft., **$1.00; 10 for $7.50.**

LINDEN. Tilia Americana, 8 to 10 ft., **$3.75.**

AMERICAN ELM. (80 ft. to 100 ft.), 8 to 10 ft., **$2.50.**

SMALL FRUITS AND BERRIES

BLACKBERRIES. Eldorado, Best of All, Macatawa, **10 for 75c; 100 for $5.00.**

DEWBERRIES. Austin, Youngberry, **10 for 65c; 100 for $4.00.**

RASPBERRIES. Chief-red; Cumberland-black; Lathan-red; Logan-black, **10 for 65c; 100 for $4.50.**

STRAWBERRY PLANTS

OCTOBER 15th TO MAY 10th.

We can supply fresh, strong, healthy plants of all the leading varieties in any quantity. Following is a partial list of the most popular sorts for planting in the vicinity of Baltimore.

Dorsett. Most productive, delicious and dependable of all early varieties. **$1.25 per 100; $6.00 per 1,000.**

Big Joe. Midseason. **$1.00 per 100; $6.50 per 1,000.**

Chesapeake. Late, very productive. **$1.00 per 100; $6.00 per 1,000.**

EVERBEARING

MASTODON. **$1.50 per 100; 1,000, $8.50.**

WAYZATA. New, prolific, brilliant red, extra sweet, **$3.75 per 100.**

Get Our Price on Berry Boxes

MANNS' SUPERIOR FARM SEEDS

Our fair dealing and conservative methods have resulted in an enormous increase in the volume of our field seed business, and we are thoroughly convinced that high quality seed at a reasonable price will make many more pleased customers during this year.

Our experience in this line and our equipment protect you from the many losses which must result from the planting of inferior seed, which is expensive at any price. All seeds offered must strictly conform to our high standards, and purchasers may depend upon our best efforts to supply only seed which is fresh, pure and free from weeds.

Continual market fluctuations make it impossible to quote firm prices here; changes are made almost daily. We shall, therefore, appreciate the opportunity to mail samples and quote the very latest price on any quantity.

When comparing quotations, consider both purity and germination.

GRASS SEEDS

KENTUCKY BLUE GRASS. June Grass. (Poa pratensis.) Universally known; desirable for pastures and lawns. Sow in fall or spring at rate of 2 or 3 bushels per acre. Fancy clean seed.

RED TOP GRASS. (Agrostis vulgaris.) Thrives well in any soil, but best on low land; produces a firm sod. Sow 1 to 2 bushels per acre.

TIMOTHY. (Phleum pratense.) Well known variety. When ready to buy write for latest prices, whether a bag or a carload. (Bushel 45 pounds.)

ORCHARD GRASS. (Dactylis glomerata.) Extremely hardy and widely known. One of the earliest to start in spring; grows rapidly; furnishes an abundance of pasture the entire season. 1½ to 2 bushels per acre. (Bushel 14 pounds.)

RHODE ISLAND BENT GRASS. (Agrostis canina.) Valuable for lawns. Sow 3 to 4 bushels per acre for lawn. 1½ to 3 bushels for pasture. (Bushel 12 pounds.)

CREEPING BENT GRASS. (Agrostis stolonifera.) Excellent for pasture when mixed with other grasses; succeeds well in most situations and thrives in moist land. Sow 40 pounds per acre. (Bushel 14 pounds.)

DROUGHT RESISTING GRASSES

PERENNIAL RYE GRASS. (Lolium perenne.) Very nutritious; valuable for meadows or permanent pastures; rapid grower; most prominent grass in England. Sow 1 to 1½ bushels per acre. (Bushel 24 lbs.)

MEADOW FESCUE. (Festuca pratensis.) Thrives in all soil; excellent for permanent pastures; starts early; very productive. Sow 1 to 1½ bushels per acre.

SHEEP'S FESCUE. (Festuca ovina.) Grows naturally on light, dry, sandy soils and mountain pastures; considered quite valuable mixed with other grasses for permanent early spring pasture. (About 12 pounds.)

HARD FESCUE. (Festuca duriuscula.) Not very productive, but it is of a very fine quality, and thrives well in dry situations where many other grasses would fail, thus making a desirable pasture variety.

MILLET

GERMAN OR GOLDEN MILLET. True Southern grown German Millet Seed is far superior to Western grown seed.

MANNS' PERMANENT PASTURE MIXTURE—$6.75 Per Acre

10 VARIETY SPECIAL (UPLAND)

Contains recleaned seed of high vitality in ten nutritious varieties properly proportioned to give continuous pasture from early spring until late fall, quickly becoming permanently established. Sow 30 lbs. per acre. **Lb. 25c; 100 lbs., $22.50.** (Low Lands—sow 25 lbs. plus 5 lbs. Red Top per acre.)

BIRD SEED

FRESH, RECLEANED STOCK

Postage extra.

Canary	lb. 10c	Sunflower	lb. 10c
Rape	lb. 10c	Lettuce Seed	lb. 25c
Millet	lb. 10c	Mixed Canary Seed	lb. 10c
Hemp	lb. 10c	Cuttle Fish Bone	lb. 40c
Maw, ¼ lb., 10c	lb. 30c		

CYCLONE SEED SOWER

Has a national reputation as absolutely the best hand sower on the market.

Price—$2.50 each Postpaid

CLOVERS

MEDIUM OR COMMON RED. (Trifolium pratense.) The Clover Seed of Commerce, and the most important and valuable of the Clover family for agricultural purposes. Sow 15 pounds per acre. (Bushel 60 pounds.)

ALSIKE OR HYBRID. (Swedish.) (Trifolium hybridum.) Hardiest of all Clovers; perennial. On rich, moist soils it yields large quantities of hay or pasturage, as it forms a thick bottom; has fibrous roots like White Clover. Esteemed highly by bee keepers.

MAMMOTH CLOVER. (Trifolium pratense perenne.) Valuable with other grasses for mixed hay; ripens about with Timothy. Being a rank grower, it is largely used for plowing under as a fertilizer.

WHITE DUTCH. (Trifolium repens.) Grows naturally in pastures in a great variety of soils and situations; indispensable in parks and lawns.

CRIMSON CLOVER. (Trifolium incarnatum.) Being an annual, it must be sown in July, August and September of each year, and, the spring following, can be cut for soiling by April 20th; for ensilage, May 1st to 15th; for seed, about first week of June. Can be grown in corn, or any cultivated crop. Ten to fifteen pounds necessary to seed an acre. Cover with a light harrow. (Bushel 60 pounds.)

ALFALFA OR LUCERNE. (Medicago sativa.) Prefers sand or gravel soil. Wet sub-soil being fatal to the plant. Roots 3 to 4 feet deep, and when well established lasts for years. 2 to 3 crops a year can be cut. Not recommended for pasture.

BOKHARA OR WHITE BLOSSOM SWEET CLOVER. (Melilotus alba.) This slightly resembles Alfalfa in growth, but is much taller, with leafier and stiffer stems. It frequently grows 5 to 6 feet in height and branches freely, with slender spikes of small, fragrant, white flowers, which afford an excellent food for bees. (Bushel 60 pounds.)

LESPEDEZA

SERICEA. Long lived perennial, deep rooted variety suitable for pasture on lands not adaptable to Alfalfa, Sweet or Red Clovers. It is highly resistant to drought; penetrates tight subsoil and does not need fertilizer or lime. Growth the first year is extremely slow and a real pasture or hay crop cannot be expected until the second year. For this reason it is advisable to sow a mixture of Korean and Sericea. Sericea survives subzero temperatures but is sometimes damaged by late freezing after growth of the new buds has started. As a precaution the second growth is allowed to go to seed thereby replacing any plants which are lost. Sow with wheat or barley in late spring at rate of 25 lbs. per acre, on firm solid soil.

KOREAN. Annual Lespedeza. Superior to Sericea in quality and quantity produced even on poor soil. A good soil builder, can be pastured until August and then allowed to reseed itself for the next year.

DWARF ESSEX RAPE

This plant is extensively grown for forage, especially for sheep, and for green manure. Prepare the ground as for turnips and sow in June or July in rows two and a half feet apart at the rate of two and a half pounds of seed per acre.

SORGHUM OR CANE

EARLY ORANGE SORGHUM. This variety is similar in growth to Early Amber, but under fair conditions produces a heavier crop. It is better for stock feeding than the Amber.

SUDAN GRASS

Sudan, the greatest forage crop, should be grown on every farm, where either hay or pasture is desired. It is highly resistant to drought and stands very heavy grazing. Yields from 2 to 10 tons per acre, is superior to either Millet or Sorghum in feeding quality, and may be fed in unlimited quantities.

COW PEAS

There is no surer or cheaper means of improving and increasing the productiveness of our soils than by sowing the Cow Pea. It has the power to extract costly nitrogen from the atmosphere and to store the same in the vines and roots, so that the land is enriched and its condition improved.

WHIPPOORWILL. A favorite early bunch-growing variety. A prime favorite in the North and West on account of its early maturity and habit of growth.

SOY OR SOJA BEANS

A Great Drought-Resisting Forage Crop, Producing Immense Quantities of Nutritious Food, Besides Being an Excellent Soil Improver.

The Soy Bean is coming right to the front as a great soil enricher, as a food for hogs or cattle, both in the green and dry state. To plow under in the green state it is certainly one of the very best plants, next to Cow Peas.

BUCKWHEAT

SILVER HULL. A superior variety in every way to the ordinary Buckwheat which it has almost entirely superseded.

OATS

WHITE SPRING OATS. Our best recleaned stock of these are Choice Northern grown, all heavy oats, which have been recleaned by us.

WRITE for Samples and Prices on Most Profitable Varieties
WHEAT—RYE—BARLEY.

SEED CHART

SEED	Weight per Bu.	Pounds per Acre	TIME OF SEEDING
Alfalfa	60	15-20	March, May—August, September
Alsike Clover	60	6-10	January, April—August, October
Barley	48	72-96	March, April—September
Blue Grass	14	30-40	February, June—August, October
Buckwheat	48	48-60	May—July
Corn, Field	56	7-10	May—July
Corn, Ensilage	56	30-35	May—July
Clover, Alsike	60	6-10	January, April—August, October
Clover, Crimson	60	15-20	July—October
Clover, Japan	25	25-30	February—May
Clover, Red	60	10-12	January, April—August, November
Clover, Sweet	60	15-25	January, May—July, September
Clover, White	60	3-5	February, June—August, October
Cowpeas (Drilled)	60	45-70	May—August
Kaffir Corn	56	20-30	May—July
Lespedeza, Korean	25	15-25	February—May
Lespedeza, Japan	25	25-30	February—May
Meadow Fescue	24	25-35	March, May—August, September
Millet, German	50	40-50	May—July
Millet, Hungarian	48	40-50	May—July
Oats	32	50-75	March—May
Orchard Grass	14	20-25	March, May—August, October
Pasture Mixture	25	25-35	March, June—August, October
Rape, Dwarf Essex	56	6-10	April—September
Redtop, Solid	14	8-12	February, June—August, October
Rye, Winter	56	60-90	July—November
Rye Grass	24	25-35	February, June—August, October
Sorghum	50	60-75	May—July
Soybeans (Drilled)	60	30-60	May—August
Sudan Grass	40	15-30	April—July
Sunflower	22	3-6	May—July
Timothy	45	8-12	February, May—August, November
Vetch, Hairy Winter	60	30-50	August—November

MANNS' SUPERIOR FLOWER SEEDS

Flower Seeds for Particular Purposes

BORDER AND EDGING

Ageratum
x Alyssum, Saxatile
x Arabis, Alpina
x Bellis Perennis
Calendula
x Campanula, Carpatica
Candytuft
Centaurea
x Cerastium
x Dianthus, Barbatus
x Heuchera
x Iberis, Sempervirens
Lobelia
Nasturtiums
Marigold
Pansy
x Papaver, Nudicaule
Petunia
x Phlox, Subulata
Portulaca
x Sedum
Verbena

FRAGRANCE

Ageratum
Alyssum, Sweet
Antirrhinum
Candytuft
Centaurea
x Dianthus
Heliotrope
x Iris
Mignonette
Nasturtium
Nicotiana
Pansy
Petunia
Scabiosa
Stock
Stock, Virginian
Sweet Peas
Verbena

x Perennial Varieties.

EVERLASTINGS

Globe Amaranth
Helichrysum
Linaria
Statice

PARTIAL SHADE

Alyssum, Sweet
x Anchusa Italica
x Anemone
Antirrhinum
x Aster, Hardy
x Candytuft, Iberis
Centaurea
China-Aster
Clarkia
x Foxglove or Digitalis
x Hibiscus, Moschata
x Lathyrus
Lupinus
x Lychnis, Chalcedonica
Myosotis, Forget-me-not
Nicotiana
Pansy
Petunia
x Primula, English Cowslip
x Rudbeckia
Schizanthus
x Violas

MOIST PLACES

x Heliotrope
x Hibiscus, Moschata
Mimulus
x Viola
x Wallflower

ROCK GARDENS

See Annuals and Perennials Marked *

DRY PLACES

x Aster
California Poppy
x Callirhoe
x Coreopsis
x Dianthus
Dimorphotheca
x Gypsophila, Paniculata
x Helianthus
x Hemerocallis
x Iris
Mesembryanthemum
Mimosa
x Papaver, Nudicaule
Phlox, Annual
x Phlox, Hardy
x Statice, Latifolium

CUT FLOWERS

Ageratum
Arctotis
Asters
Babysbreath
Calendula
Cornflower
Cosmos
Dianthus
Gaillardia
Larkspur
Marigold, African
Mignonette
Nasturtium
Nigella
Phlox, Drummondi
Salpiglossis
Scabiosa
Snapdragon
Stocks
Strawflower
Sweet-sultan
Xeranthemum
Zinnia

TALL VARIETIES

Amaranthus, Caudatus
x Campanula, Pyramidalis
x Coreopsis
Cosmos
x Dahlia
x Digitalis
x Hibiscus, Moschata
x Hollyhock
Marigold, African
Nicotiana
Ricinus

WINDOW BOXES

Ageratum
Alyssum
Begonia
Centaurea
Lobelia
Nasturtium
Oneothera
Pansy
Petunia
Phlox
Portulaca
Salvia Splendens
Thunbergia
Verbena
Vinca
Zinnia, Lilliput

POOR SOIL

Alyssum, Sweet
Amaranthus
Balsam
California Poppy
Calliopsis
Cornflower
Four-O'Clock
Marigold
Nasturtium
Poppy
Portulaca

ANNUAL FLOWER SEEDS

The ease of cultivation and the quickly effective results obtained from Annuals make them indispensable, as they are adaptable to an almost endless variety of arrangement.

Even in perennial borders, beds and rock gardens, annuals are very essential to bridge the span between periods of bloom of the perennials and to give desired color effects which are possible only with annuals. Many varieties can be started indoors early and transplanted giving continuous bloom from early summer until frost. Some sorts are very easily grown in late summer to produce plants for the sun-parlor or conservatory where they will blossom during the winter.

Annuals bloom more profusely than biennials or perennials because it is not necessary for them to store up food or build root systems for succeeding years; their business being to produce flowers and seeds abundantly the first year. For this reason it is advisable to cut the flowers before going to seed so that the plants will continue to bloom freely.

For Variety, Color, Fragrance, Economy Sow Annuals.

POTTED PLANTS

50c to $1.00 per doz. according to variety and size.

Potted plants in the following varieties are carried in stock at our store after May 10th.

Ageratum	Pansy
Alyssum	Petunia
Aster	Phlox
Calendula	Scarlet Sage
Coleus	Snapdragon
Coreopsis	Stock
Dianthus	Summer Poinsettia
Geranium	Verbena
Heliotrope	Vinca
Lantana	Wallflower
Lobelia	Zinnia

MARIGOLD. Crown of Gold.
CALENDULA. Orange Shaggy.
CORNFLOWER. New Jubilee Gem (Blue).
COSMOS. Sensation (Mixed Colors).
GAILLARDIA. Indian Chief, annual (Red).
ZINNIA. Double Mexican, Haageana (Mixed).

(No plants mailed or shipped.)

AGERATUM

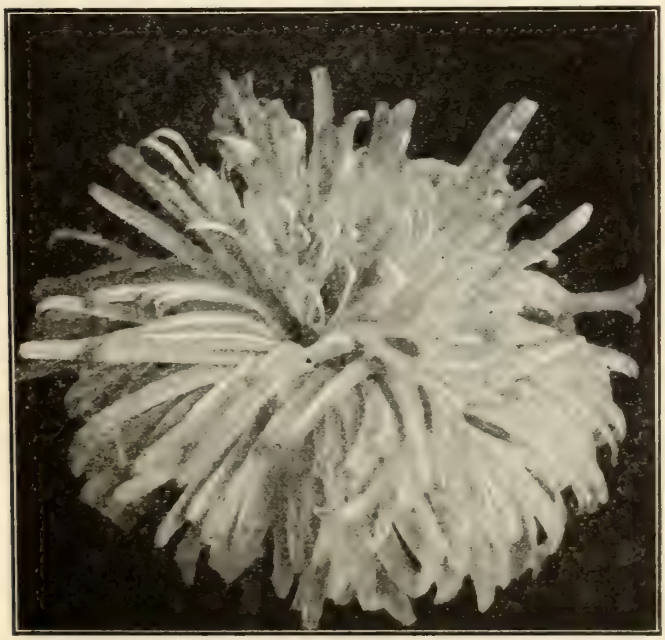
***Splendid for bedding or pot culture, covered from June until frost with a mass of very attractive flowers of a tufted appearance. Very effective when contrasted with geraniums. Large-flowered White, Blue or Mixed. Pkt., 10c; oz., 70c. Dwarf Varieties. Pkt., 10c; ½ oz., 50c.**

AGROSTEMMA—Rose of Heaven

COELI-ROSEA. A very showy old time favorite greatly admired; excellent cut flowers, grows 12 to 15 inches; blooms early. Color bright rose pink. Pkt., 10c; oz., 25c.

ALYSSUM

***Sweet Alyssum. Little Gem. Very popular border flower, coming into bloom six weeks after planting seed and requiring the least attention of all flowers. Very erect and dwarf, its white flowers greatly enhancing the beauty of any bed or border. Height 4 inches. Pkt., 10c; oz., 70c.**
PROCUMBENS (Carpet of Snow)—Extra dwarf, very dense. Pkt., 10c; ½ oz., 40c.



Crego Aster

ANTIRRHINUM OR SNAPDRAGON

This border and bedding plant of long blooming season is now one of the best perennials suitable for flowering as an annual. The long showy spikes of curiously-shaped tubular flowers with spreading lobes and finely marked throats are fragrant as well as brilliantly-colored. They are very desirable for cutting as the blooms are borne well above the dark glossy leaves and keep fresh for a long time.

RUSTPROOF TALL MIXED, pkt., 10c; ¼ oz., 50c; oz., $1.50.

RUSTPROOF SEMI-DWARFED MIXED, pkt., 10c; ½ oz., 45c.

SEPARATE COLORS: White; Appleblossom, (pink and White); Defiance (Scarlet); Fascination (deep flesh pink); Wallflower (Yellow Bronze); Luteum (Canary Yellow). Giant Type, pkt., 10c; ¼ oz., 75c.

ASTERS

Very popular because of their beauty and ease of culture. The varieties listed represent the finest Asters of the early, midseason and late types and will give a profusion of bloom from July to late October. Asters require good rich soil and during the growing period should be well supplied with water.

CALIFORNIA SUNSHINE. Flowers measure from 4 to 5 inches in diameter are half double and exhibit all the grace and beauty of the single Aster. The golden yellow ground tone of the quilled petals contrasts wonderfully with the outer petals. Forms a loosely curled circle which makes the flowers pleasing to the eye, fine for cutting. **Mixed, pkt., 10c; ¼ oz., 75c.**

ASTERS (Wilt Resistant)

CREGO. Flowers of immense size, 4 to 5 inches in diameter borne on very long stems. Plants are of strong branching growth, 2 to 2½ feet high. Separate colors, pkt., 10c; ⅛ oz., 25c. Mixed, pkt., 10c; ⅛ oz., 20c.

EARLY GIANT LIGHT BLUE. A. A. Winner. 3 ft. branching plants, 5 inch flowers. Pkt., 25c; ⅛ oz., 75c.

LATE BRANCHING. A handsome and very distinct variety resembling Japanese Chrysanthemums. The plants grow 1½ feet in height and width and the large full petaled blossoms are borne on long stems or branches. Comes into flower ten days later than other asters. Separate colors, pkt., 10c; ⅛ oz., 25c. Mixture, pkt., 10c; ⅛ oz., 20c.

AMERICAN BEAUTY. Mixed, pkt., 10c; ⅛ oz., 60c.

Varieties marked * suitable for Rock Gardens.

Anchusa

AMARANTHUS

Very useful in borders of tall plants, among shrubs, or in centers of large beds. One type has large feathery plumes or sprays of rich crimson coloring while the other is grown exclusively for the brilliant-colored leaves.

CAUDATUS. (Love Lies Bleeding.) Plants of erect growth three to four feet high producing numerous feather sprays of rich crimson color. **Pkt., 10c; ¼ oz., 25c.**

MOLTEN FIRE. Very ornamental and beautiful; 4 feet tall; easily grown, leaves dark bronze, top of plant and centers of lower leaves, brilliant Poinsettia red. **Pkt., 10c; ½ oz., 65c.**

SALICIFOLIUS. (Willow-Leaved or Fountain Plant.) Grows two to three feet high, with long hanging flower heads and foliage of a deep purple coloring. **Pkt., 10c; ½ oz., 40c.**

SPLENDENS. (Rainbow Plant.) Beautiful variegated foliage with large crimson flower heads. **Pkt., 10c; ½ oz., 35c.**

TRICOLOR. (Joseph's Coat.) Similar to Splendens, having a single erect stalk of brilliantly colored foliage. **Pkt., 10c; ½ oz., 30c.**

ARCTOTIS (Blue-Eyed African Daisy)

GRANDIS. White petals tinged lilac with centers steel blue. A splendid and easily grown flower, 2 feet tall. Good for cutting. **Pkt., 10c; oz., 75c.**

ANCHUSA (Summer Forget-Me-Not)

CAPENSIS, ATROCOERULEA. A fine blue flower through late spring, summer, and fall. Easily grown. Height 2 feet. **Pkt., 10c; oz., 35c.**

BLUE BIRD. Vivid indigo blue, plants compact and of even growth. Stems about 18 inches. **Pkt., 10c; oz., 75c.**

BALSAM OR LADY SLIPPER

An easy growing annual of quick growth, producing numerous flowers resembling tiny roses. **Splendid double mixed, pkt., 10c; oz., 75c.**

BARTONIA (Golden Yellow)

AUREA. Large, showy flowers, 2½ inches in diameter; deep orange yellow. Blooms early, height 18 inches. **Pkt., 10c; oz., 70c.**

CALENDULA—POT MARIGOLD

Effective in beds or potted; showy, free-flowering, hardy annuals. Extra Double Orange King. **Pkt., 10c; oz., 30c.** Finest mixed. pkt., 10c; oz., 25c.

BALL'S GOLDEN. Glowing Yellow. **Pkt., 10c; oz., 30c.**

BALL'S, IMPROVED GOLDEN ORANGE. Long stemmed extra double, excellent for forcing. **Pkt., 10c; oz., 30c.**

LEMON QUEEN. Deep lemon-yellow flowers approaching golden, showy for bedding and borders. **Pkt., 10c; oz., 50c.**

ORANGE SHAGGY. Very distinct type having long narrow fringed petals, somewhat resembling rich deep orange Chrysanthemums, long stems, grows 18 in. high. **Pkt., 10c; ¼ oz., 75c.**

RADIO. Medium sized, clear orange, closely set petals, attractively quilled. **Pkt., 10c; oz., 40c.**

CAMPANULA—CANTERBURY BELLS

An old-fashioned favorite, stately, showy, and easily grown, hardy biennial. **Single and Double Mixed. pkt., 10c; oz., 50c.**

ANNUAL. Liberty Bell, violet-blue; Angelus Bell, deep pink. Pkt., 10c; ⅛ oz., 70c.

CANDYTUFT

This hardy annual is universally known and its clusters of small flowers are very beautiful and useful for cutting and borders.

FINEST HYBRID MIXTURE OF ALL COLORS. Pkt., 10c; oz., 40c.

CARNATION (Margaret)

Easily grown as an Annual producing large double blooms 4 or 5 months after sowing seed. Very fragrant. (See Perennials.)

CELOSIA OR COCKSCOMB

PLUMOSA. Feathered varieties mixed. **Pkt., 10c; oz., 50c.**

DWARF EMPRESS COCKSCOMB. Dark-leaved, bright crimson. **Pkt., 10c; ¼ oz., 75c.**

COCKSCOMB. Tall mixed. **Pkt., 10c; ½ oz., 50c.**

CHILDSII. (Chinese Woolflower.) Mixed—**pkt., 10c; ¼ oz., 30c.** Crimson—**pkt., 10c; ½ oz., 75c.**

CENTAUREA

CENTAUREA CYANUS OR BACHELOR'S BUTTON OR CORN FLOWER. Charming old-fashioned flowers. Free flowering habit, reseeding itself year after year. Useful as a cut flower, as well as a garden decoration. Double mixed. **Pkt., 10c; oz., 40c.**

CENTAUREA GYMNOCARPA OR DUSTY MILLER. One foot, foliage finely cut of silvery gray color, used for bedding. **Pkt., 10c; oz., 45c.**

CENTAUREA MOSCHATA OR SWEET SULTAN. Beautiful, sweet scented, artistic shaped flowers borne on long stems, when cut will last for several days. **Mixed. Pkt., 10c; ½ oz., 30c.**

CORNFLOWER, JUBILEE GEM—Dwarf plants freely blooming, vivid blue. **Pkt., 10c; ¼ oz., 75c.**

Calendula

Varieties marked * suitable for Rock Gardens.

Arctotis

Didiscus

Dianthus

CHRYSANTHEMUM

The annual Chrysanthemums are free-blooming, easily grown plants, having large flowers in a variety of brilliant colors, fine for cutting.

Mixed. Finest double hybrids. **Pkt., 10c; ¼ oz., 20c; oz., 70c.** Single. **Pkt., 10c; oz., 40c.**

CLARKIA

Very pretty, profuse flowering annuals, much used for edging. They grow from nine to eighteen inches high. Useful for hanging baskets. Double mixed. **Pkt., 10c; oz., 70c.**

CALLIOPSIS

Very handsome and showy plants with numerous flowers excellent for bouquets. Thrive well in any soil.

MAYFIELD GIANT. Brilliant deep golden yellow flowers. **Pkt., 10c; ⅛ oz., 30c.**

COSMOS

One of the most satisfactory hardy annuals, flowering in late summer. Fine for cutting and easily grown. Can be sown anywhere and transplanted. Grows 4 to 6 feet high.

EARLY KLONDIKE ORANGE FLARE. Bright vivid orange, very free flowering. **Pkt., 10c; ¼ oz., 50c.**

SENSATION. (White and Shades of Pink Mixed.) Extremely early free blooming, flowers 4 to 5 inches, plants 4 ft. with rather heavy foliage. **Pkt., 10c; ¼ oz., 75c.**

DOUBLE EARLY FLOWERING MIXED. Pkt., 10c; ⅛ oz., 50c.

DATURA

Large branching plants producing very large handsome, double or single, trumpet-shaped blossoms of exquisite fragrance. Excellent for late summer and autumn flowering. Mixed colors. **Pkt., 10c; ½ oz., 30c.**

DIANTHUS OR PINKS

These very beautiful and popular biennials flower freely the first year from seed, and in most locations they are quite hardy and produce larger flowers the second year.

***HEDDEWEGI.** Hybrids, very large double flowers. **Pkt., 10c; oz., 70c.**

SWEET WIVELSFIELD. Hybrid Type. Flowers large, somewhat similar to Sweet William. **Pkt., 10c; ¼ oz., 75c.**

LACINIATUS SPLENDENS. Large single brilliant crimson, white-eyed flowers borne profusely on neat dwarf compact plants. **Pkt., 10c; ¼ oz., 50c.**

DIDISCUS—Blue Lace Flower

COERULEUS. Lavender, blue, lace-like flower; heads blooming profusely from June to September; 1½ feet tall. **Pkt., 10c; ½ oz., 75c.**

DIMORPHOTHECA

***AURANTIACA (African Daisy).** Very showy flowers for bed or border, bushy plants with orange-gold daisy-like blooms on long stems. **Pkt., 10c; ¼ oz., 35c.** Hybrid Mixed. **Pkt., 10c; ¼ oz., 35c.**

EUPHORBIA

HETERPHYLLA (Mexican Fire Plant). Grown by many as "Summer Poinsettia" as it produces a crown of brilliant red leaves. Rapid grower; 30 to 36 inches tall. **Pkt., 10c; oz., 60c.**

VARIEGATA (Snow on the Mountain). **Pkt., 10c; ½ oz., 25c.**

HELICHRYSUM-EVERLASTING FLOWER

Monstrosum. Double mixed, first quality, mixed. **Pkt., 10c; ¼ oz., 25c; oz., 75c.**

Helichrysums

Varieties marked * suitable for Rock Gardens.

Dimorphotheca

Larkspur

Gilia

GILIA

Exceedingly graceful and attractive, with tiny star-like flowers, borne profusely on plants 12 to 15 inches tall; especially valuable for bees. Charming in flower border; a good cut flowers. Tall mixed. Pkt., 10c; oz., 25c.

GLOBE AMARANTH-GOMPHRENA

Similar in type to Bachelor's Button but having flowers of perfect globe shape. Mixed colors. Pkt., 10c; oz., 25c.

GODETIA (Satin Flower)

DOUBLE-DWARF MIXED. Azalea flowered. Plants grow 1 foot high, and bloom in great profusion for nearly six weeks. Excellent for cutting and easily grown. Pkt., 10c; oz., 50c.

GYPSOPHILA (Baby's Breath)

*Single—(A). Graceful plants with light fairy-like growth. A quick growing annual with myriads of small open bell-shaped flowers. These fine mist-like flowers are excellent for their delicate effect in bouquets. Pkt., 10c.; oz., 25c.

HELIANTHUS

CHRYSANTHEMUM FLOWERED. Double yellow, 7 feet. Pkt., 10c; oz., 25c.

KOCHIA—SUMMER CYPRESS

Quick growing hedge plant about two and one-half feet high. Very symmetrical and attractive, the bushes taking on a distinctive red tinge late in the summer; for this reason often called Mexican Fire Bush. Pkt., 10c; oz., 25c.

LANTANA (Half Hardy)

One of the most desirable greenhouse or bedding plants, constantly in bloom, somewhat resembling Verbenas. Dwarf Hybrid Mixed. Pkt., 10c; oz., $1.00.

LARKSPUR

One of the best known of garden flowers and if planted in April will produce flowering plants by the first of July and continue to bloom until frost.

GIANT IMPERIAL DOUBLE MIXED. Pkt., 10c; oz., 50c. Separate colors. Pkt., 10c; oz., 75c.

GIANT HYACINTH FLOWERED MIXED. Pkt., 10c; oz., $1.00.

For Perennial Larkspur see Delphinium.

ROSAMOND. Tall double stock flowered, early, free flowering, pure deep pink; another All-American Gold Medal Winner. Pkt., 10c; oz., 60c.

LAVATERA—ANNUAL MALLOW

TRIMESTRIS MIXED. A free flowering variety, grows 2 feet tall bearing from July until fall a profusion of cup-shaped flowers of various shades. Pkt., 10c; oz., 25c.

LUPINUS

Free-flowering, easily grown annuals with long graceful spikes of richly colored pea-shaped flowers. Prefers a little shade, acid soil and cool weather.

DWARF ANNUAL MIXED. All colors. Pkt., 10c; oz., 50c.

HARTWEGII GIANT KING MIXED. Enormous 3 foot spikes; 6 to 8 per plant; oxford blue or white. Pkt., 10c; oz., 50c.

KING BLUE, KING WHITE. New improved strain 3 to 4 ft. producing 4 to 6 flower spikes to a plant. Pkt., 10c; ¼ oz., $1.00.

MOERHEIMI. Rose and white. Pkt., 10c; ½ oz., 50c.

MARIGOLD

French Marigolds are smaller than the African but are marked and spotted with varied shades of red and orange. The African is very large, double and in solid colors.

AFRICAN. Tall, double, extra mixed, first quality. Pkt., 10c; oz., 75c. Dwarf Double Mixed. Pkt., 10c; oz., 50c.

FRENCH. Dwarf double mixed. Pkt., 10c; oz., 50c.

GUINEA GOLD. Orange flushed with gold, height 2 to 2½ feet; flowers semi-double. Pkt., 10c; oz., $1.00.

CROWN OF GOLD. Collarette type, chrysanthemum formed, fragrant, double. 2½-inch blooms; plants 2 ft. tall. Pkt., 10c; ⅛ oz., 75c.

SUNSET GIANTS. Largest known Marigolds, measuring 5 inches or more, plants 3 to 4 ft. tall, profuse bearer of fragrant flowers, coming about sixty percent double. Pkt., 10c; ⅛ oz., 50c.

LOBELIA

CRYSTAL PALACE COMPACTA. Dark blue flowers, dark foliage, 4 inches tall. Pkt., 10c; ¼ oz., 85c.

MARVEL OF PERU—FOUR O'CLOCK

Large showy fragrant flowers, blooming the entire season. Succeed well in any ordinary garden soil in a sunny location. Mixed. Pkt., 10c; oz., 20c.

MESEMBRYANTHEMUM

*CRYSTALLINUM OR ICE PLANT. Dwarf trailing annual plants. Flowers white prized for its distinctive icy foliage. Pkt., 10c; oz., 50c.

MIGNONETTE

Well known fragrant bedding or potting plant. Sowings made in April and again in July will result in a succession of bloom from early summer until frost.

MACHET GIANT MIXED. Large spikes, very fragrant. Pkt., 10c; oz., 75c.

Varieties marked * suitable for Rock Gardens.

Lobelia

Lupinus

Nigella

NASTURTIUM

GOLDEN GLEAM. New double sweet scented dwarf variety sure to become very popular. Pkt., 10c; oz., 30c.

DWARF MIXED. Very brilliant in all shades of yellow, red and purple. Pkt., 10c; oz., 15c; ¼ lb., 35c; lb., $1.00.

DOUBLE GLEAM HYBRIDS. Large well-formed, sweet-scented double flowers in an extremely wide range of colors. Pkt., 10c; oz., 50c. NEW SCARLET GLEAM. Extremely large and lovely. Pkt., 10c; ½ oz., 50c. NEW DWARF

DOUBLE GOLDEN GLOBE. Pkt., 15c; ½ oz., 50c.
TALL—CHOICEST MIXED. Oz., 10c; ¼ lb., 30c; lb., 75c.

NICOTIANA

AFFINIS. Gives a continuous display of flowers through the summer and autumn; plant 2 to 3 feet high. The blooms sweet scented and measure 3 inches in diameter. Mixed. Pkt., 10c; ¼ oz., 20c.

NIGELLA OR LOVE-IN-A-MIST

Free-flowering plant, 1 foot high, producing curious flowers surrounded by the finely cut foliage. Easily grown; useful for cutting.

DOUBLE BLUE. Pkt., 10c; oz., 25c.

ORNAMENTAL GRASS

COIX LACRYMA. (Job's Tears.) Pkt., 10c; oz., 25c.

PANSIES

These very popular and beautiful flowers may be sown in April or May for summer flowering or in August for early spring blooming. They thrive best in an open exposure, with protection during the winter.

BUGNOT'S GIANT. Flowers of enormous size, nearly circular in form and in a great variety of the most rare and handsome colors. Pkt., 10c; ⅛ oz., $1.50.

MAMMOTH EXHIBITION MIXTURE. True round and solid pansy form of giant size, each color an attraction. Pkt., 10c; ⅛ oz., $2.25.

MANN'S TRIUMPH OF THE GIANTS. (Frilled.) Finest for commercial or private use. Blooms enormous, most striking in brilliancy and beauty of color. Pkt., 10c; ⅛ oz., $1.50.

PETUNIAS

HYBRIDA GRANDIFLORA. Giants of California mixed. Pkt., 10c; 1/16 oz., $5.00.

HOWARD'S STAR. Purple white striped. Pkt., 10c; ¼ oz., 50c.

HYBRID FIMBRIATA. Giant flowering, choice mixed, extra selected. Pkt., 10c; ⅛ oz., $12.00.

ALL DOUBLE. Dwarf Giant fringed Victorious Mixed. Packets, about 100 seeds, 40c; 1000 seeds, $2.00.

DWARF BEDDING VARIETIES

HYBRIDA NANA COMPACTA. Dwarf extra fine free flowering sorts.

ROSY MORN. Pink white throat.
ROSE OF HEAVEN. Deep brilliant rose.
NORMA. Blue with white star.
SNOWBALL. Pure white.

Separate colors or mixture. Pkt., 10c; ¼ oz., 75c.

SALMON SUPREME. 1938 All-American First Award. Pkt., 25c; 1/32 oz., $1.00.

HOLLYWOOD STAR. A. A. Winner. New lovely rich deep pink with amber throat; five pointed star shaped flowers are so profuse they hide the foliage. Pkt., 25c; ⅛ oz., $2.50.

***PINK GEM.** Gold medal winner '34 "All American Selection," grows 5 inches high, globe shaped, entirely covered with deep pink blooms. Pkt., 10c; 1/16 oz., 75c.

Flaming Velvet—Rich, brilliant, velvety crimson, hybrida type. A Gold Medal Winner. Pkt., 10c; ⅛ oz., $2.50.

Martha Washington—Bright pink with darker center, ruffled; plants compact and covered with blooms. Pkt., 10c; 1/32 oz., $2.00.

BALCONY PETUNIAS

HYBRIDA PENDULA. For porch and window boxes, also excellent for bedding in solid masses of one or more colors. Large blooms produced in abundance. Deep Blue, Crimson, Rose, White and Mixed. Pkt., 10c; 1/16 oz., 35c.

PHLOX

Phlox makes a magnificient show in beds and masses where their brilliant and varied colors produce a gorgeous effect. Very easily raised and afford a bright display of flowers, all through the summer.

***DRUMMONDII.** Choice mixture, first quality. Pkt., 10c; ¼ oz., 35c.

DRUMMONDI GIGANTEA. Salmon glory—A. A. Selection—gigantic florets, pure salmon pink with cream-white eye, plants ten inches tall. Pkt., 25c; ⅛ oz., $4.00. Art shades. Mixture. Pkt., 10c; ⅛ oz., $1.50.

***STAR PHLOX.** (Cuspidata.) With star-shaped flowers, dwarf growth. Pkt., 10c; ¼ oz., 50c.

LARGE FLOWERING DWARF VARIETIES

***DEFIANCE.** Deep scarlet, very compact, free-flowering. Pkt., 10c; ¼ oz., $1.50.

***DWARF MIXED.** Selected colors, compact habit of growth, very effective in beds or borders. Pkt., 10c; ¼ oz., $1.00.

Varieties marked * suitable for Rock Gardens.

Stocks

Schizanthus

Salpiglossis

POPPIES

AMERICAN LEGION. Shirley type; large brilliant orange-scarlet with yellow anthers. Pkt., 10c; oz., 25c.

TULIP POPPY. One of the most brilliant annuals, the flowers are 3 inches in diameter and of a brilliant scarlet color, greatly resembling tulips. Pkt., 10c; ½ oz., 60c.

THE SHIRLEY. Special strain mixed; fine for bedding or cutting; single annual. Pkt., 10c; oz. 25c.

CARNATION FLOWERED. Splendid double fringed flower annual; mixed. Pkt., 10c; oz., 25c.

PEONY FLOWERED. Dwarf annual, very useful for bedding. Pkt., 10c; oz., 25c.

ESCHSCHOLTZIA. (California Poppy). Double mixed. Spreading plants 1 foot high, suitable for beds and borders, blooming from June until frost. Hybrid mixed. Pkt., 10c; ¼ oz., 70c.

PORTULACA—Mexican Rose

Very showy annual, easily grown, and very effective when massed in beds or edgings. A profusion of brilliantly colored flowers are produced throughout the summer. They thrive best in rather rich soil in a sunny situation.

***LARGE-FLOWERING EXTRA DOUBLE MIXED.** Pkt., 10c; ⅛ oz., 85c.

***LARGE FLOWERING SINGLE MIXED.** All colors. Pkt., 10c; ¼ oz., 20c.

RICINUS—CASTOR OIL BEAN

Ornamental plants of strong, stately growth, the foliage having the appearance of a tropical plant, very effective when planted in masses or as centers of Canna or Dahlia beds.

ZANZIBAR. Extra mixed. Oz., 25c.

SALPIGLOSSIS

Petunia-like flower borne on bushy stem, about 24 inches tall, various shades, which flower profusely during the summer. Mixed. Pkt., 10c; ½ oz., 70c.

SALVIA SPLENDENS OR SCARLET SAGE

Very popular bedding plant, extensively used for lawn and conservatory decoration, bearing long spikes of brilliant flowers from July to frost.

BONFIRE. Very dense flowering 2½ foot plants, excellent for beds or massing for color effect. Pkt., 10c; ¼ oz., 75c.

FIREBRAND. The most brilliant of all types. If sown in February produces flowers from June until frost. Its dwarf compact growth makes it especially suitable for edging lawns or borders. Pkt., 10c; ⅛ oz., $1.50.

SANVITALIA

***PROCUMBENS.** Useful border and edging plant of spreading nature, 8 inches tall, continuously producing an abundance of deep golden yellow double blooms resembling small zinnias. Pkt., 10c; ¼ oz., 75c.

SCABIOSA OR MOURNING BRIDE

Fine free-flowering plants for mixed borders and highly esteemed for cut flowers. The blooms are borne on long, erect stems in globular heads in colors ranging from white to dark maroon. Height 2 to 2½ feet. Double mixed. Pkt., 10c; oz., 50c.

SNAPDRAGON. See Antirrhinum, page 43.

SCHIZANTHUS

***MONARCH HYBRID MIXED.** A plant noted for its wonderful variety of coloring and peculiarly shaped flowers, fine for cutting, graceful fern-like foliage, height about 18 inches. Pkt., 10c; ¼ oz., 75c.

SENSITIVE PLANT—MIMOSA

Curious and interesting annuals, with pinkish-white flowers; the leaves close and droop when touched or shaken. Pkt., 10c; ¼ oz., 15c.

STEVIA

SERRATA. Grown out-doors or as a home plant for its dainty, fragrant, tiny white, star shaped flowers produced profusely. Excellent cut flower for combining with other varieties. Pkt., 10c; ⅛ oz., 50c.

STOCKS-10-WEEKS

DOUBLE EARLY GIANT IMPERIAL. (Bismarck 26-inch.) Mixed. Pkt., 10c; ⅛ oz., 75c.

DRESDEN PERPETUAL. These fine stocks will live outdoors for several years if protected with a fairly thick layer of straw, which must be lifted early in the spring. 20-inch. Pkt., 10c; ¼ oz., 75c.

LARGE FLOWERED DOUBLE MIXED. Pkt., 10c; ¼ oz., 75c.

DWARF DOUBLE LARGE FLOWERED MIXED. 12-inch. Pkt., 10c; ¼ oz., 75c.

***VIRGINIA.** Very early bedding variety. Six inch plants bearing a profusion of small flowers continuously during cool weather. Mixed. Pkt., 10c; oz., 30c.

SUMMER POINSETTIA

See Amaranthus Molten Fire also Euphorbia, Heterophylla.

TITHONIA

SPECIOSA GRANDIFLORA FIREBALL. Brilliant orange-scarlet flowers 3 to 4 inches across, dark green foliage, blooms in fall, 6 feet tall depending on soil and climate. Pkt., 10c; ¼ oz., 70c.

Varieties marked * suitable for Rock Gardens.

SWEET PEAS

CALIFORNIA GROWN SUCCESSFUL EVERYWHERE

One ounce for 50 feet of row.

THE SPENCERS are of exceptionally large size, the petals waved and frilled and the general effect remarkably graceful and effective. The plants are of vigorous growth and remain in bloom for a longer time than the Grandiflora sorts.

CULTURE.—Grow named varieties of the colors you like best; know them by name in your garden and you will derive much more pleasure from them.. Early in the spring make a trench three to four inches deep in rich, mellow soil, so arranged that no water can stand in it and plant the seed in the bottom, covering at first only one inch deep. When the plants are two inches high, cultivate; and as they grow, gradually fill in the trench. When the plants are about five inches high they should be supported by poultry netting, strings or brush. Water should be applied thoroughly once or twice a week early in the morning or in the evening. The blooms should be picked before they form pods or the plants will soon stop flowering. The following have been selected from hundreds of varieties, as being those of the highest quality in their respective classes.

SPENCER VARIETIES

AMBITION. Rosy lavender.

CAPTAIN BLOOD. Brilliant blood scarlet, veneered copper.

COMMANDER GODSALL. Large, navy blue.

DEBUTANTE. Salmon shaded coral.

GIGANTIC. White, black seeded, best white.

GLENEAGLES. Very large, pale blue lavender.

GOOD CHEER. Deep Begonia rose.

MAGNET. Bright cream pink.

PINKIE. Large rose pink.

PRINCE OF ORANGE. Best deep orange.

THE SULTAN. Black velvety maroon.

WHAT JOY. Deep, rich cream.

Pkt., 10c; oz., 20c; ¼ lb., 50c; lb., $1.75.

EARLY FLOWERING SPENCERS

Florists' varieties for early forcing—can also be grown successfully outdoors, coming into bloom a month earlier than original Spencers.

ALL WHITE. Largest pure white

BLUE BONNET. Best clear blue.

HARMONY. Clear lavender.

VALENCIA. Bright orange, sunproof, long stems.

VULCAN. Vivid scarlet, sunproof.

ZVOLANEK'S ROSE. Bright rose pink.

PRICES—Pkt., 10c; oz., 40c; ¼ lb., $1.30; lb., $4.00.

SWEET PEA MIXTURES

Our Sweet Pea Mixtures are combined of carefully considered proportions of varieties which have proven themselves to be the very choicest of their respective types and colors. These mixtures cannot be equaled in their beauty and flowering qualities.

MANNS' SUPERB SPENCER MIXTURE. Pkt., 10c; oz., 15c; ¼ lb., 35c; lb., $1.25.

VENIDIUM

FASTUOSUM. Very showy plant 2 to 3 feet tall, producing 3 inch diameter brilliant orange flowers with dark centers. The soft gray woolly foliage is very attractive. Pkt., 10c; 1/16 oz., $1.00.

VERBENA

One of the finest bedding plants and also suitable for borders, with its heads of brilliantly colored flowers, producing one mass of bloom throughout the summer. Seeds may be planted as soon as the ground can be worked or earlier indoors and transplanted to the beds in April or May. They succeed in almost any good garden soil.

HYBRID MIXED. Extra large flowered, brilliant colors and vigorous. Pkt., 10c; ¼ oz., 25c.

*HYBRID COMPACTA MIXED. Very compact and erect in its habit of growth; excellent border variety. Pkt., 10c; ¼ oz., 75c.

VINCA (Periwinkle)

Very attractive bushy plants with luxuriant glossy green foliage, producing in abundance handsome flowers that bloom freely all summer. Excellent for borders, summer bedding and window boxes, one foot tall. Choice mixed. Pkt., 10c; oz., $1.00.

Varieties marked * suitable for Rock Gardens.

XERANTHEMUM

CHOICE DOUBLE MIXED. Silky flowers which are highly prized for dried bouquets. Plants grow about 2 feet tall and bloom from early summer until frost. **Pkt., 10c; ½ oz., 50c.**

ZINNIAS—DOUBLE

We have given particular attention to these annuals, developing them into perfection unsurpassed.

GIANT FLOWERED MIXED. **Pkt., 10c; ½ oz., 75c.**

DAHLIA FLOWERED IN SEPARATE COLORS

CRIMSON MONARCH. Deep crimson.
DREAM. Deep lavender purple.
GOLDEN DAWN. Golden yellow.
ILLUMINATION. Deep soft pink.
POLAR BEAR. Pure white. **Pkt., 10c; ¼ oz., 50c; oz., $1.50.**
WILL ROGERS. New memorial zinnia. Glowing intense scarlet blooms of immense size. **Pkt., 25c; ¼ oz., $1.00.**
DAHLIA FLOWERED MIXED. Pkt., 10c; oz., $1.25.
FANTASY. Large, well-rounded, informal graceful Chrysanthemum shaped blooms on long stems in the usual range of zinnia colors. **Pkt., 10c; ¼ oz., 50c.**

DOUBLE LILLIPUT

Dainty profuse blooming type, 12 to 15 inches tall; flowers 1 inch in diameter, very popular. Orange, Salmon Rose, Lilac, Scarlet, Mixed. **Pkt., 10c; oz., $1.25.**

Dahlia Flowered Zinnia

VINES

BALLOON VINE. (Cardiospermum.) **Very graceful, rapid grower, producing inconspicuous flowers, foliage light green. Pkt., 10c; oz., 20c.**

BALSAM APPLE. (Balsamina.) **Pkt., 10c; ¼ oz., 25c.**

BALSAM PEAR. (Momordica Charantia.) **Fine for trellises or low fences. Rapid growing vines with lobed light green leaves and beautiful fruits of a rich golden yellow color, which when ripe, open up, disclosing the seeds enclosed in a carmine covering. Pkt., 10c; ¼ oz., 25c.**

CARDINAL CLIMBER. (Ipomae Quamoclit Hybrida.) **An easily grown climber developing to perfection in sandy loam soil. The brilliant scarlet flowers are borne profusely. The leaves resemble those of a fine Japanese Mahle. Pkt., 10c; ½ oz., 40c.**

CANARY BIRD FLOWER. (Nasturtium peregrinum.) **A most beautiful climber of rapid growth with handsome fringed, rich yellow flowers and fine delicate foliage. Pkt., 10c; ¼ oz., 15c.**

COBAEA SCANDENS. Of rapid growth, with fine foliage and large bell-shaped flowers of a beautiful violet blue color. Pkt., 10c; ¼ oz., 35c.

WILD CUCUMBER VINE. (Echinocystis lobata.) **A quick-growing and attractive climber, will grow 20 feet in six weeks, the large foliage affording plenty of shade. Covered during the summer and fall with sprays of small white flowers. Pkt., 10c; oz., 20c.**

CYPRESS VINE. (Ipomoea quamoclit.) **Beautiful and very popular, slender vine, with fern-like foliage and a mass of small star-shaped flowers. Mixed colors. Pkt., 10c; ¼ oz., 15c.**

GOURDS. A large and interesting class producing a great variety of curious fruits, many of which are peculiarly marked. Pkt., 10c; oz., 35c.

KUDZU VINE. (Pueraria thumbergiana.) **Perennial. One of the most rapid growing of all climbers, providing a dense screen of large rich green leaves. Pkt., 10c.; ¼ oz., 25c; oz., 75c.**

HYACINTH BEAN. (Dolichos.) **Of extra rapid growth, introduced from Japan and very much superior to the old-fashioned flowering bean. Darkness, purple flower; daylight, white flowers; or mixed. Pkt., 10c; oz., 30c.**

JAPANESE HOP VINE. (Humulus Japonicus.) **Where an attractive climber is desired that will stand rough usage there is nothing better. Variegated leaves. Pkt., 10c; ¼ oz., 20c.**

MOON FLOWER. (Ipomoea mexicana.) **Very pretty, rapid growing vine, with handsome trumpet-shaped flowers. Pkt., 10c; ¼ oz., 20c.**

MORNING GLORY. (Convolvulus.) **This splendid and very popular climber needs no introduction. Our Giant Japanese Imperial Mixture is unsurpassed. Pkt., 10c; oz., 15c.** Scarlet O'Hara. All American Winner of gold medal award, rich dark wine red or deep rosy crimson, 3½ inch diameter. Pkt., 10c; oz., $1.50. Heavenly Blue. Sky blue, shading golden yellow in throat, extremely large. Pkt., 10c; oz., 75c.

PASSION FLOWER. (Passiflora.) **A most interesting and well known climber, bearing singularly beautiful flowers. Pkt., 10c; ½ oz., $1.00.**

SMILAX. (Medeola.) **This popular Boston Smilax is a most desirable window vine, on account of its charming, glossy green, graceful foliage. Perennial, splendid for greenhouse or conservatory. Pkt., 10c; ¼ oz., 35c.**

THUNBERGIA. (Black-eyed Susan.) **Free-flowering and of rapid growth. May be trained on a slender trellis or allowed to run freely over the ground to cover bare spaces. Pkt., 10c; ¼ oz., 35c.**

SCARLET RUNNER. Of very rapid growth, producing clusters of showy bright scarlet pea-shaped blossoms, followed by edible beans of very fine quality. Pkt., 10c; lb., 50c.

CINNAMON VINE. Hardy climber, small white flowers. Strong tubers, 15c each.

MADEIRA VINE. Rapid growing climber. Tubers, 15c each. $1.50 per doz.

CLEMATIS PANICULATA. (White.) **One of the most beautifully hardy climbers; of strong rapid growth, producing a profusion of deliciously fragrant flowers. Roots, 50c each.**

JACKMANII. A perennial climber with very delightful purple flowers. Roots, 75c each.

Varieties marked * suitable for Rock Gardens.

PERENNIAL FLOWER SEEDS

Perennials are used extensively in old fashioned gardens, hardy borders and rock gardens. They are easily grown and when once established become increasingly beautiful year after year. Care should be taken in selecting varieties according to their color, height and season of bloom.

The seeds may be sown indoors or in hot beds early in the spring and transplanted to their permanent locations when three or four inches tall. Very satisfactory results can also be obtained by sowing the seeds early in August and shading from excessive heat by using lath or burlap screens. It is well to give young plants winter protection the first year.

The following list includes those varieties which are most popular because of their beauty, usefulness and adaptability to local climatic conditions.

ACHILLEA—Ptarmica

THE PEARL. Small double white flower in great profusion. 2 feet tall. Blooms freely during July and August. An excellent perennial for cutting, and very fine for the foreground of shrubs and for borders. Pkt., 10c; 1/16 oz., 60c.

ACONITUM (Monkshood or Helmet Flower)

NAPELLUS. A dwarf variety growing 18 inches high, with large pale blue flowers in September and October. Pkt., 10c; ⅛ oz., 50c.

ALYSSUM

***SAXATILE—Compactum.** An excellent border plant 6 to 9 inches tall covered with bright sulphur-yellow flowers during early spring. Pkt., 10c; ¼ oz., 25c; oz., 75c.

ANCHUSA ITALICA (Alkanet)

DROPMORE. One of the finest blue flowered plants growing 4 feet tall. Magnificent spikes from June until frost. An excellent plant for the background to hide walls or fences. Pkt., 10c; oz., 75c.

ANEMONE

***CORONARIA ST. BRIGID.** Blooms early in the spring, grows about 10 inches tall, and has a variety of colors. Scarlet, Violet or Mixed. Pkt., 10c; ⅛ oz., 40c.

AQUILEGIA OR COLUMBINE

As a cut flower the long spurred Aquilegias are the daintiest of our outdoor grown flowers. Very hardy, blooming profusely early in the season and remaining in bloom for a considerable period. **LONG SPURRED GIANT HYBRIDS.** Pkt., 10c; ⅛ oz., 75c.

MRS. SCOTT ELLIOTT HYBRIDS. The world's finest strain, consisting of the most wonderful colors, with very long spurred flowers. Pkt., 10c; ⅛ oz., 50c.

***CAERULEA—The Rocky Mountain Columbine.** Blue and white flowers, 18 inches tall, blooms during June. Pkt., 10c; ⅛ oz., $1.00.

ARABIS—Rock Cress

***ALPINA.** An excellent early blooming dwarf perennial, covered with a mass of white flowers. It makes a fine border to taller perennials. Blooms during April. Pkt., 10c; ½ oz., 60c.

ARMERIA—Sea Pink

***FORMOSUM HYBRIDS.** Dwarf growing plants with grassy leaves and clover-like flower heads from May until July in various shades of pinks. Pkt., 10c; ⅛ oz., 50c.

ASTERS

MICHAELMAS DAISY. Mixed. Pkt., 10c; ⅛ oz., 75c.

AUBRIETIA

***LARGE FLOWERING HYBRIDS.** Excellent dwarf spreading plants with rose, blue and lilac, blooms early in spring. Pkt., 10c; ¼ oz., 75c.

Varieties marked * suitable for Rock Gardens.

Anemone

BELLIS—English Daisy (Double)

Favorite perennials producing their handsome double flowers in the spring. Rich soil and a cool situation suit them best.

GIANT RED. Extra large double red flowers. Pkt., 10c; ⅛ oz., $1.00.

GIANT ROSE. Extra large double rose flowers from April on. Prefers a cool, shady place. Pkt., 10c; ⅛ oz., $1.00.

GIANT WHITE. Beautiful white double flowers produced on compact and sturdy plants. Pkt., 10c; ⅛ oz., $1.00.

DOUBLE MIXED. This mixture includes a well-balanced proportion of all colors. Pkt., 10c; ⅛ oz., 50c.

GIANT TUBULOSA. With quilled petals. Pkt., 10c; ⅛ oz., 65c.

Aquilegia

BOSTON IVY

AMPELOPSIS VEITCHII. Popular wall ivy with three lobed leaves which turn to a bright red color late in the fall. **Pkt., 10c; oz., 50c.**

CACTUS

Good Mixture. **Pkt., 10c; ⅛ oz., 65c.**

CALCEOLARIA (Tender)

HYBRIDA GRANDIFLORA. Produces a mass of pocket-like flowers of various shades through the spring and summer. Fine for the greenhouse. **Pkt., 50c; 1/64 oz., $2.50.**

CALLIRHOE—Poppy Mallow

***INVOLUCRATA**—Rosy crimson flowers borne profusely from July until October. Of trailing habit, does well even in poor and sandy soil. **Pkt., 10c; ¼ oz., 50c.**

CAMPANULA—CANTERBURY BELLS

CALYCANTHEMA. Tall, erect growing plants, completely covered with large cup and saucer-shaped flowers during May and June. A hardy Biennial. Blue, Rose, White and Mixed. **Pkt., 10c; ⅛ oz., 50c; ½ oz., $1.50.**

CAMPANULA (Single)

***CARPATICA.** Hare Bells. Flowers clear blue and white, held erect on wiry stems 8 inches high, begins blooming in July until October. **Pkt., 10c; ½ oz., 50c.**

PYRAMIDALIS. Chimney Bells. Produces spikes 4 to 6 feet, covered with star-shaped flowers during entire summer. Blue and White. **Pkt., 10c; ½ oz., $1.00.**

PERSICIFOLIA. Peach Bells. Elegant blue and white flowers, height 2 feet. **Pkt., 10c; ⅛ oz., 50c.**

CARNATIONS

With protection these well known half-hardy perennials can be wintered over outdoors. When planted early they will begin to bloom in about four months and continue until late in the fall. For winter blooming they should be cut back by removing the flower shoots early in the fall and transplanted to pots and kept in a cool room.

EARLY DWARF VIENNA. Mixed Dwarf, compact plants about a foot tall, displaying an excellent range of bright colors. **Pkt., 10c; ¼ oz., 75c.**

MARGUERITE. Half Dwarf, choice double mixed. **Pkt., 10c; ¼ oz., 75c.**

PERPETUAL (Famous Chaubaud Type). Choicest mixture. **Pkt., 10c; ¼ oz., 85c.**

CHRYSANTHEMUM PLANTS

Hardy Garden Varieties

NEW DOUBLE KOREAN HYBRIDS

CALIPH. Ox blood red with velvety sheen. **35c each.**
SYMPHONY. Mauve rose, overcast soft coppery rose. **35c each.**
THE MOOR. Port wine red, wonderful with King Midas. **25c each.**
KING MIDAS. Grandest of all yellows. **25c each.**
EMBER. Coral-orange and bronze shades. **25c each.**
SEQUOIA. Amber-beige; good size and fully double. **25c each.**

NEW SINGLE KOREAN HYBRIDS

APOLLO. Bronze-red and gold. **20c each.**
DAPHNE. Daphne pink and lilac rose. **20c each.**
HEBE. Silvery pink. Fragrant. Best of true pinks. **20c each.**
LOUISE SCHLING. Glowing salmon red. **20c each.**
MARS. Deep red, overlaid silvery sheen. **20c each.**
VULCAN. Carmine red, shading to garnet crimson. Fragrant. **20c each.**

OTHER OUTSTANDING VARIETIES OF GARDEN MUMS

CRIMSON SPLENDOR. Rich crimson-maroon, golden center. **20c each.**
EARLY BRONZE. Extremely early. Lively bronze-yellow. **20c each.**
JUDITH ANDERSON. Golden-yellow button. Superb for cut flowers and for edging. 16 inches tall. **30c each.**
AMELIA. Improved "Pink Cushion". **20c each.**
Bronze form of above; new and wonderful color. **30c each.**
White form of above; (NEW). **50c each.**
Yellow form of above; (NEW). **75c each.**

Marguerite Carnations

CANDYTUFT

***IBERIS SEMPERVIRENS.** Large heads of white flowers, covering the plants during May; 1 foot. **Pkt., 10c; ¼ oz., 90c.**
GIBRALTARICA. Much like the above, color of lilac rose. **Pkt., 10c; ¼ oz., 45c.**

CENTAUREA

MONTANA. Showy, thistle-like, blue flowers on sturdy plants, growing 2 feet tall. Blooms freely from late April until late June. **Pkt., 10c; ½ oz., 30c.**

CERASTIUM—Snow in Summer

TOMENTOSUM. A valuable creeping plant, with silvery white foliage and snowy white star-shaped blooms covering the plants during May and June. When in full bloom the plants appear like a bed of snow. **Pkt., 10c; ¼ oz., 30c.**

CINERARIA (Greenhouse)

HYBRIDA. Extra large flowered, first quality mixture. **Pkt., 50c; 1/16 oz., $6.00.**

MARITIMA. Entirely different from the popular Cineraria, being most useful for bedding. Silver-leaved; also called Dusty Miller. **Pkt., 10c; oz., 90c.**

COLEUS (Tender)

An attractive foliage plant for ornamental bedding. Finest hybrid mixture. **Pkt., 10c; 1/16 oz., 90c.**

COREOPSIS—Golden Wave

GRANDIFLORA, fl. pl. This variety produces a large number of double and semi-double broadly expanded golden yellow flowers. The plants bloom freely during late spring and summer. Grows about 2 feet tall. **Pkt., 10c; ¼ oz., 25c.**

CYCLAMEN (Tender)

Universally admired, tuberous rooted house plants with beautiful foliage and richly colored flowers. Sow the seed in light rich soil, barely covering, and keep at a temperature of 50 to 60 degrees F. Water freely until well started. Seeds sown in spring, by autumn will produce little bulbs, which placed in pots will bloom the following spring.

AMSTERDAM GIANTS, Florists Prize Mixture. Pkt., 10c; 100 seeds, $2.00; 1/32 oz., $3.00.

Varieties marked * suitable for Rock Gardens.

DAHLIA (Half Hardy)

Seed should be planted very early indoors and the plants transplanted in May or June. Most of the plants will bloom the same year. The roots should be dug before freezing weather and stored in sand in a cool place.

CACTUS HYBRIDS. Extra double mixed. **Pkt., 10c; ⅛ oz., $3.50.**

SINGLE MIXED. Pkt., 10c; oz., 90c.

DELPHINIUM (Hardy Perennial Larkspur)

One of the finest hardy perennials. Very effective in beds, masses or borders. To prolong the season of bloom cut the old flower stems off after they have faded and new shoots will produce flower heads successively. Sow Delphinium seed as soon as it is received to insure strong germination.

GOLD MEDAL HYBRIDS. A selected English variety, producing long spikes, completely covered with large blooms. The colors range from sky-blue to a deep pansy violet. **Pkt., 10c; ⅛ oz., 50c.**

NUDICAULE. Deep scarlet. **Pkt., 10c; ⅛ oz., $1.25.**

WREXHAM HOLLYHOCK STRAIN. Light and deep blue shades. **Pkt., 10c; 1/16 oz., $1.00.**

DIANTHUS—Hardy Pinks

FLORISTS PERPETUAL. Large clusters, fragrant, very useful for cut flowers. Mixed. **Pkt., 10c; oz., $1.00.**

***PLUMARIUS—Single Mixed.** Large showy single flowers in wide range of colors during May and June. 1 foot tall. **Pkt., 10c; ¼ oz., 35c.**

***PLUMARIUS—Double Mixed.** Of very compact growth, double flowers in many colors, during May and June. 1 foot tall. **Pkt., 10c; ¼ oz., 85c.**

FEVERFEW (Matricaria)

Beautiful, small, white button-like double flower heads. Plants of husky growth with very finely cut dark green foliage; desirable for bedding. **Pkt., 10c; ½ oz., 75c.**

FORGET-ME-NOT—Myosotis

***BIENNIAL ALPESTRIS.** Mixed. **Pkt., 10c; ¼ oz., 25c.**

***PALUSTRIS.** Perennial. This is the Marsh Forget-Me-Not with its attractive heavy dark green foliage and bright blue flowers. Plant in the shade. **Pkt., 10c; ¼ oz., 50c.**

FOXGLOVE OR DIGITALIS

In stately appearance the Foxgloves occupy a prominent place among our hardy plants. They succeed well in an average garden soil. Early summer sowings do best.

MONSTROSA FINE MIXED. This mixture of the Giant Foxgloves is sure to please every gardener. It contains a wide range of rich colors. **Pkt., 10c; oz., $1.00.**

THE SHIRLEY. This is a really beautiful new strain of Foxglove, bearing long, stately spikes closely set with large open bells of many bright colors. Spotted, especially showy and strong growing. **Pkt., 10c; oz., 75c.**

GAILLARDIA

BURGUNDY. Coppery Scarlet. Some flowers slightly tipped yellow. **Pkt., 10c; ¼ oz., 90c.**

PORTOLA HYBRIDS. A new strain of Gaillardia of strong growth. The long stemmed, well-shaped flowers are golden yellow, marked with rich scarlet. Most outstanding. **Pkt., 10c; ¼ oz., 40c.**

THE DAZZLER. Bright golden yellow with crimson center, rather large. **Pkt., 10c; ¼ oz., 60c.**

GERBERA (Jamesoni Hybrids)

NEW AFRICAN TRANSVAL DAISY, producing wonderfully beautiful daisy-like blooms of large size, in a wide range of colors. Grown either as a greenhouse plant or propagated in hot-beds and set out early in May. Very profitable cut flower for florists. **Pkt., 10 seeds, 10c; 100 seeds, 75c; 1,000 seeds, $5.00.**

GEUM—Coccineum

***MRS. BRADSHAW.** Graceful, double orange-scarlet flowers produced during the summer on plants 2 feet tall. **Pkt., 10c; ⅛ oz., 50c.**

***LADY STRATHEDEN.** Fine, double, golden yellow flowers borne on graceful stems. Blooms during the summer; 2 feet. **Pkt., 10c; ⅛ oz., 60c.**

Delphinium

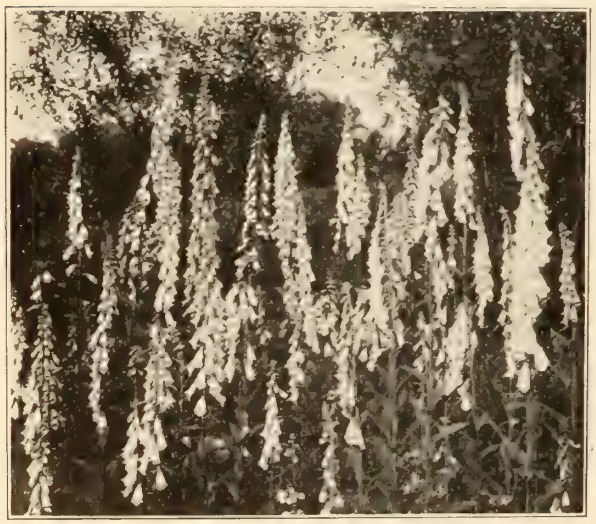
Gerbera

Feverfew

Varieties marked * suitable for Rock Gardens.

Sweet Rocket

Gaillardia



Foxglove

GYPSOPHILA—Baby's Breath

SINGLE (PANICULATA). Tiny white flowers borne on slender stems. The plants are simply covered with blooms during June and July; 2½ feet. **Pkt., 10c; oz., 30c.**

DOUBLE BABY'S BREATH. Small, double, white flowers, carried on slender wiry stems. Makes a fine show during June and July. **Pkt., 20c; ⅛ oz., $2.00.**

***REPENS.** An excellent variety for rock-garden planting because of its prostrate growth. The plants are covered with small white flowers during June and July; 4 inches tall. **Pkt., 10c; ¼ oz., 50c.**

HELIANTHEMUM (Rock-Rose)

***MURABILE MIXED.** Dwarf evergreen, blooms May and June, dry sunny locations; 1 foot. **Pkt., 10c; ½ oz., 50c.**

HELENIUM (P)

HOOPESII. Yellow with orange disk in center. Blooms in August and September. **Pkt., 10c; ½ oz., 75c.**

HELIOPSIS—Hardy Zinnia

LEMOINE STRAIN. The double golden yellow flowers resembling a Dahlia are produced on stalks 3 to 4 feet tall during the entire summer. Excellent for cutting. **Pkt., 10c; ¼ oz., 75c.**

HELIOTROPE (Half Hardy)

GIANT LEMOINI, mixed. Pkt., 10c; ¼ oz., 50c.

HESPERIS MATRONALIS
(SWEET ROCKET)

Old fashioned garden plants growing 2 to 3 feet high, bearing spikes of white or purple flowers. Execellent for planting in a border or among shrubbery. Pkt., 10c; oz., 25c.

HEUCHERA—CORAL-BELLS

SANGUINEA. Deep red spikes, blooms from May until July. **Pkt., 10c; 1/16 oz., $1.75.**

HIBISCUS—MALLOW MARVELS

GIANT GOLDEN BOWL. Hardy if protected. **Pkt., 10c; ¼ oz., 35c.**

GIANT MIXED. Canes growing 4 feet tall with large flower spikes in Crimson, Pink and White, blooms from May until July. **Pkt., 10c; ¼ oz., 50c.**

HOLLYHOCKS

Chaters Double Choice Mixture. Pkt., 10c; ¼ oz., 40c.
Chaters Single Mixed. Large, very artistic blooms. **Pkt., 10c; ¼ oz., 20c.**

IBERIS—See Candytuft (Perennial)

INCARVILLEA

DELAVAYI. Bright rosy purple flowers, plants 15 to 18 inches tall. June and July. Succeeds well in sunny border. **Pkt., 10c; ⅛ oz., $1.25.**

LATHYRUS—Perennial Sweet Peas

Hardy climber with branches 8 to 10 feet long, blooms freely during the summer. Excellent for cutting.

MIXED. Crimson, pink, white. **Pkt., 10c; oz., 50c.**

LINARIA—Kenilworth Ivy

***CYMBALARIA.** Small lilac blue flowers, are born on a charming neat trailing plant. **Pkt., 10c; ¼ oz., 50c.**

LINUM—Perennial Flax

***PERENNE.** Beautiful light blue flowers borne profusely on plants 2 feet tall from July until August. The blooms last only one day but they are produced continuously. **Pkt., 10c; oz., 25c.**

LUNARIA—Honesty

Biennial plant having round, silvery, paper-like seed-pods which are dried for winter bouquets. **Pkt., 10c; ¼ oz., 25c.**

Varieties marked * suitable for Rock Gardens.

Physostegia

Platycodon

Saponaria

LUPINUS—Hardy Lupines

POLYPHYLLUS. Blue. A very popular sort, bearing clear deep azure blue flowers from June until September. **Pkt., 10c; oz., 25c.**

MOERHEIMI. A very showy spike graced with rose and white flowers. **Pkt., 10c; ¼ oz., 25c; oz., 75c.**

SUNSHINE. A beautiful variety bearing a profusion of bright yellow flower spikes, arboreus habit. **Pkt., 10c; oz., 60c.**

RUSSEL. New hybrid. **Pkt., 25c.**

LYCHNIS

Elegant hardy perennials of easy culture, excellent for massing in large beds or borders.

HAAGEANA HYBRIDA MIXED. Large blooms, 1½ feet, free flowering. **Pkt., 10c; ¼ oz., 75c.**

LYTHRUM

SALICARIA. Fine long heads of rich purplish red flowers from early July until late September, 2 to 3 feet tall. **Pkt., 10c; ½ oz., $1.25.**

NEPETA

***MUSSINI.** Pale mauve flowers, May-September. 1 foot. Aromatic. **Pkt., 10c; ⅛ oz., 50c.**

OXALIS

TROPAELOIDES. Yellow. **Pkt., 10c; ⅛ oz., 75c.**

PENSTEMON

GIANT FLOWERED. Choice mixed. Beautiful bell-shaped flowers on 18-inch spikes. **Pkt., 10c; ⅛ oz., $1.00.**

PHLOX

DECUSSATA—New Hybrids. 2 to 3 feet high; flowers in all bright colors; sow seeds late in fall and they will germinate in the spring. **Pkt., 10c; ¼ oz., 75c.**

PLATYCODON—Chinese Bellflower

GRANDIFLORA. Large showy, deep blue flowers on 20-inch spikes, are produced all summer. A splendid plant for the hardy border. **Pkt., 10c; ⅛ oz., 25c.**

PHYSALIS—Chinese Lantern Plant

FRANCHETI. Dense bushes about 2 feet high, producing freely, bright, orange-scarlet, lantern-like fruits. **Pkt., 10c; ½ oz., 50c.**

PHYSOSTEGIA—False Dragon Head

A very pretty hardy perennial; dense bushes, bearing freely delicate tubular flowers; 3 to 4 feet; July-August.

VIRGINICA. Pink. **Pkt., 10c; ¼ oz., $1.25.**

POPPIES

ORIENTAL SCARLET. The blooms are an intense shade of scarlet red having a conspicuous black blotch on each petal, borne on 2½ foot stems, during June and July. **Pkt., 10c; ¼ oz., 40c.**

PRINCESS VICTORIA LOUISE. An exquisite variety with mammoth flowers of bright salmon rose, very free bloomer. **Pkt., 10c; ⅛ oz., 40c.**

CHOICEST MIXED. It includes many bright shades as is found in Oriental Poppies. **Pkt., 10c; ¼ oz., 50c.**

ROMNEYA COULTIN MATILIJA. (Hardy California Tree Poppy.) 4 to 5 feet. Flowers white, 5 inches in diameter, very fragrant. **Pkt., 10c; ⅛ oz., $1.00.**

POPPY NUDICAULE—Iceland Poppies

Great numbers of flowers on slender stems 1 foot long throughout the season.

***COONARA.** Salmon shades. A particularly fine strain of a lovely pink shade of latest introduction. **Pkt., 20c; ⅛ oz., 65c.**

***SUNBEAM MIXED.** Embracing all the graceful, gaily, colored flowers in white, yellow and orange found in Iceland Poppies. **Pkt., 10c; ¼ oz., 75c.**

PRIMULA—Primrose

***AURICULA.** Many bright colors, including orange, copper, brown, and other pastel shades. An excellent hardy Primrose for the border; 6 inches tall. Blooms during spring. **Pkt., 10c; 1/16 oz., $1.00.**

***VULGARIS (English Primrose).** Large rich yellow flowers during the spring; 6 to 8 inches tall. A favorite variety. **Pkt., 10c; 1/16 oz., 75c.**

OENOTHERA. Evening Primrose. **Pkt., 10c; ⅛ oz., 80c.**

CHINESE PRIMROSE. (Primula chinensis fimbriata.) Popular winter blooming pot plant. Special florist strain, giant double mixed. **Pkt., 10c; 1/32 oz., $5.25.**

MALACOIDES. Fine house plant, lilac. **Pkt., 10c; ⅛ oz., $2.00.**

PYRETHRUM—Painted Daisy

SINGLE MIXED. A showy perennial with daisy-like flowers, blooming during May and June. The plants grow 2 feet tall and come in shades of rose, pink, red and white. **Pkt., 10c; ¼ oz., 75c.**

DOUBLE MIXED. This mixture contains many bright showy colors, shading from white to deepest red. The blooms are elegantly doubled. **Pkt., 10c; ¼ oz., $1.75.**

Varieties marked * suitable for Rock Gardens.

Trollius

Stokesia

Wallflower

RUDBECKIA—Cone Flower

PURPUREA. (Echinacea.) A handsome variety, producing large, dull rosy purple flowers with a black center. Blooms from July until October; 2 feet. **Pkt., 10c; ½ oz., 75c.**

SAPONARIA—Rock Soapwort

***OCYMOIDES.** Splendid hardy rock plant, with rose pink flowers during spring and summer; 6 to 9 inches tall. **Pkt., 10c; ¼ oz., 25c.**

SCABIOSA

Charming perennials for border and cut flower culture.

CAUCASICA. (Lila.) The large lavender blue flowers are borne profusely on fine long stems. The plants are about 2 feet tall. **Pkt., 10c; ⅛ oz., 60c.**

SHASTA DAISY

Splendid hardy perennial plants, having large white flowers with yellow center, born singly on long stiff, wiry stems; excellent for cutting; profuse bloomers. Alaska. **Pkt., 10c; oz., 75c.**

SILENE

SCHAFTA. Dwarf rose purple, June-September; 6 inches; full sun. **Pkt., 10c; ¼ oz., 50c.**

STATICE—Sea Lavender

Splendid hardy perennials, either for the border or rockery, producing all summer panicles of small flowers, which can be dried and used for winter bouquets; 2 feet.

LATIFOLIA. Large deep-blue flowers. **Pkt., 10c; ½ oz., 75c.**

STOKESIA—Cornflower Aster

CYANEA. A lovely hardy plant producing an abundance of handsome lavender flowers blooming all summer, 2 feet high. **Pkt., 10c; ⅛ oz., 60c.**

SWEET WILLIAM—Biennial

DIANTHUS BARBATUS

Sow the seed very early and have vigorous young plants coming into bloom the same season. They may be sown, however, in August to bloom the following spring.

SINGLE MIXED. All shades of white, pink and red. **Pkt., 10c; oz., 40c.**

DOUBLE MIXED. Very fine; all colors. **Pkt., 10c; oz., 75c.**

DOUBLE EXTRA DWARF MIXED. **Pkt. 10c; oz., $1.50.**

TRITOMA—Poker Plant

EARLY HYBRID. Massive orange-scarlet flowers, spikes 3 feet tall. Needs winter protection. **Pkt., 10c; ¼ oz., 75c.**

TROLLIUS (Globe Flower)

Beautiful border and rockery plants, 18 inches, flowering from May to July.

HYBRIDUS. Orange globe. **Pkt., 10c; ⅛ oz., $3.00.**

VALERIANA (Coccinea)

Very showy red flowered border plant, 2 to 3 feet. Does well in poor soil. **Pkt., 10c; oz., 75c.**

VERONICA—Speedwell

SPICATA MIXED. Bright blue, pink and white flowers during June. Grows 1½ feet tall. **Pkt., 10c; ¼ oz., 75c.**

VIOLAS OR TUFTED PANSIES

Well-known, free-flowering hardy perennials, easily grown from seed. While flowers are not so large as the regular type of Pansy, the blooms are produced in such an abundance and the flowering season so much longer that they are superior to pansies for some purposes. Seed sown in April produces flowering plants by June and from then on until frost they are a sheet of bloom.

BLUE GEM (Jersey Gem). 1/16 oz., $3.00.

LUTEA SPLENDENS (Yellow). ¼ oz., 75c.

HYBRIDA. Choice mixed. **Pkt., 10c; ⅛ oz., $1.00.**

VIOLET-ODORATA

This beautiful, sweet-scented hardy perennial can be easily grown from seed, thriving best in a partially shaded, moist situation. **Pkt., 10c; ⅛ oz., $1.00.**

WALLFLOWER

GIANT GOLIATH. The earliest and best single variety; large flowered, extra dark blood red. **Pkt., 10c; ¼ oz., 20c.**

SINGLE MIXED. **Pkt., 10c; oz., 50c.**

BRANCHING TALL. Double mixed. **Pkt., 10c; ⅛ oz., $2.00.**

Varieties marked * suitable for Rock Gardens.

GIANT FLOWERED CANNAS

CITY OF PORTLAND. 3½ ft. pink. Flowers of largest size. A glowing shade of pink. Foliage green. 75c per dozen.

INDIANA. 6 ft. Very large flowers of a rich, golden orange color. 60c per dozen.

KING HUMBERT. 4 ft. Leaves are purple-brown over bronze. Crowned with immense heads of velvety orange-scarlet. 60c per dozen.

MRS. ALFRED F. CONARD. 4 ft. The grandest salmon-pink in existence. 60c per dozen.

PRESIDENT. 4 ft. The most wonderful green leaved, red flowered canna in cultivation. 75c per dozen.

YELLOW KING HUMBERT. 4 ft. Green leaves, golden-yellow flowers blotched red. 60c per dozen.

IRIS GERMANICA

ALCAZAR. Standards, light bluish violet. Falls, deep purple, bronze veined at the throat. Its growth is robust with widely branching flower stalks, bearing large blooms of waxy texture; 4 feet tall.

JEAN D'ARC. A delicate sort of good size and form; white with edges partly checked and scapes heavily suffused in violet.

KING OF IRIS. The standards, a clear lemon color, falls, deep satiny-brown with a broad border of golden yellow.

MOTHER OF PEARL. Pale bluish lavender of exceptional substance and texture; 4 feet.

PARISENSIS. The fine blue standards harmonize well with the deeper blue falls. The flowers are large and are borne very early. The free blooming habit has made it a great favorite.

Any of the above Varieties or Mixed 10c each; $1.00 per doz.

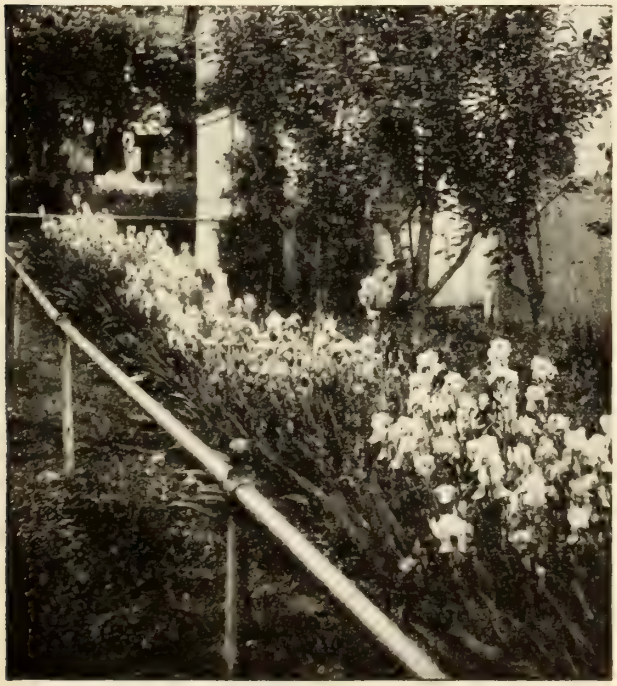
JAPANESE IRIS

Perfectly hardy and excellent for naturalizing, coming into flower about the middle of June. They continue for five or six weeks at which time they are particularly welcome.

Mixed—10c each; $1.00 doz.; $7.50 per 100.

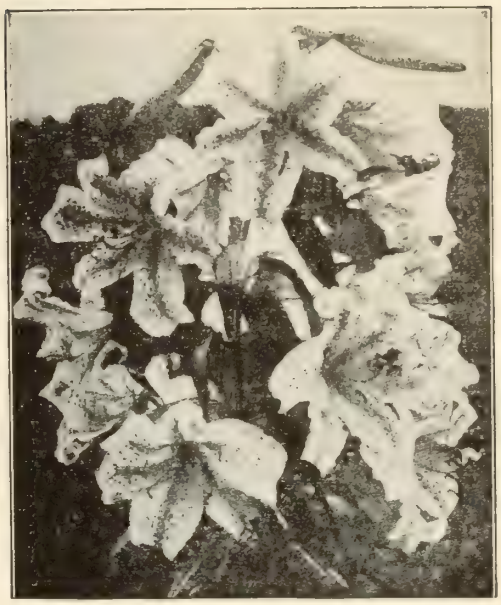
HYACINTHUS CANDICANS

An ornamental mid-summer flowering plant, producing from 20 to 100 large bell shaped flowers of a creamy white color on spikes two to three feet long. **10c each; $1.00 doz.**



Hardy German Iris

HARDY OUTDOOR LILIES



AURATUM (Gold Banded Japanese Lily)

LILIES

	Each	Doz.
Auratum. Petals white spotted red with golden rib down center	$ .30	$3.00
Speciosum rubrum. White spotted with red	.30	3.00
Henryi. Orange yellow Speciosum	.25	2.50
Tenuifolium. Bright rich scarlet	.20	2.00
Tigrinum splendens (Single). Red spotted purple black	.20	1.85
Regale. White, shading to yellow in the center with pink tinge on outer edge	.20	1.85

PEONIES

	Each
Baroness Schroeder. Immense white, fragrant	$ .50
Couronne d'Or. White with yellow stamens	.30
Edulis Superba. Clear mauve pink, very early	.30
Felix Crousse. Ruby red, blooms profusely	.35
Festiva Maxima. White, carmine spot on center petal	.35
Mons. Jules Elie. Glossy lilac pink, shading to a deeper rose at the base	.40
Sarah Bernhardt. Midseason. Appleblossom pink with each petal silver tipped	.50

AMARYLLIS

Giant American Hybrids

The most desirable type of Amaryllis, especially beautiful and easily managed in the amateur's window or conservatory, produces from four to six gigantic blooms of perfect form. Mixed colors, 2½-3 inches. 25c each; $2.75 per dozen.

TUBEROUS ROOTED BEGONIAS

Especially adapted to window or conservatory culture. We offer bulbs produced from the best seed strains, largest size 2 inches and up in diameter. Scarlet, pink, yellow. Single or double. 15c each; $1.50 per dozen.

EXCELSIOR PEARL TUBEROSE

One of the most fragrant and most popular of the summer flowering bulbs. May be started early in hotbeds or pots, or planted in open ground after the first of May. **Extra large size bulbs. 35c per dozen; $2.50 per 100.**

CALADIUM ESCULENTUM OR ELEPHANT'S EAR

Large bulbs, 3 to 4 inches in diameter. **15c each; $1.50 per dozen; medium sized bulbs 5c each; 50c per dozen. Add postage. Special price on quantities.**

Gladioli in Mass Planting

LA PALOMA. Large bright vivid orange of heavy texture. A new and distinct shade of one of the best orange varieties. Second early.

MAID OF ORLEANS. Beautiful milky white with cream throat. Tall straight plant with up to 8 large well placed blooms open. Early midseason. (84 days.)

MARGARET FULTON. Clear rich soft rose pink of a beautiful distinct shade. 6 to 8 perfectly placed medium sized blooms open. One of the finest cut flower varieties. Early.

MARMORA. Massive lavender-gray with purple throat.

MINUET. A beautiful clear light lavender. Considered the finest gladiolus in this color.

MOROCCO. Glistening deep black red with a fiery sheen. Mid-season. (70-80 days.)

MOTHER MACHREE. Lavender, edged salmon-pink.

MR. W. H. PHIPPS. LaFrance pink, overlaid with salmon rose, lighter towards the center, lower petals faintly striped and speckled with ruby. A large flower on strong stem, many open at a time.

MRS. VAN KONYNENBURG. Best true blue variety, grows five feet tall, stems erect, flowers well placed on stems.

PELEGRINA. Large dark blue. 6 or more perfectly placed blooms open with most of the remaining buds showing color. One of the best dark blue varieties. Early.

PICARDY. Rich apricot, pink blooms.

PURPLE GLORY. Deep velvety maroon red with almost black blotches as if burned into petals. Beautifully ruffled and of remarkable color.

RED PHIPPS. Bright red, free blooming, good commercial variety. Many flowers open at one time. Late midseason. (93 days.)

SCHWABEN GIRL. Pure pink without any other shade or blotch. Mid-season. (70-80 days.)

SONATINE. Light pink often flaked with darker pink. Mid-season. (70-80 days.)

VEILCHENBLAU. Blue-violet.

GLADIOLI

Plant Manns' Gladioli Bulbs. They are strictly 1½ inch or more in diameter, sound, true to name, and can be absolutely depended upon to produce large, beautiful well-formed blooms.

Cultural Suggestions: Set bulbs 4 inches deep and 6 inches apart, either in rows or massed in beds, borders or among shrubbery. Successive plantings from April to July will bloom from July until frost. They will thrive in any good garden soil, but a sunny location is best. Cultivate frequently and water freely while blooms are forming.

AFLAME. Orange-red of immense size.

BERTY SNOW. Large lavender.

CANBERRA. Large tall yellow, strong grower, tall spike. Many flowers open at one time. Midseason.

CHARLES DICKENS. Beautiful purple violet. A very good grower with large flowers on tall spikes.

COMMANDER KOEHL. Large massive clear blood red. Tall straight spike. Considered by many the best medium red. Early midseason.

DR. F. E. BENNETT. Peach red, overlaid with flame scarlet, throat speckled ruby and creamy white. Flowers of large size and on strong stem.

GATE OF HEAVEN. Very rich pure yellow, beautifully ruffled and of good substance. Early. (60-70 days.)

GIANT NYMPH. Large light salmon pink. Tall grower. One of the very best commercial pink varieties. Early. (79 days.)

J. S. BACH. Fine orange salmon, somewhat lighter in throat with white lines on each petal. Early. (60-70 days.)

Variety	PRICES Each	Doz.	Per 100
Aflame	$0.05	$0.50	$3.50
Berty Snow	.04	.40	3.00
Canberra	.08	.75	5.00
Charles Dickens	.05	.50	3.50
Commander Koehl	.06	.60	4.00
Dr. F. E. Bennett	.04	.40	3.00
Gate of Heaven	.06	.65	4.50
Giant Nymph	.04	.40	3.00
J. S. Bach	.08	.80	6.00
La Paloma	.05	.50	3.50
Maid of Orleans	.06	.60	4.00
Margaret Fulton	.06	.60	4.00
Marmora	.05	.50	3.50
Minuet	.06	.60	4.00
Morocco	.07	.65	4.50
Mother Machree	.08	.80	5.50
Mr. W. H. Phipps	.05	.50	3.50
Mrs. Van Konynenburg	.06	.65	4.50
Pelegrina	.06	.65	4.50
Picardy	.04	.40	3.00
Purple Glory	.07	.65	4.50
Red Phipps	.07	.65	4.50
Schwaben Girl	.08	.75	5.00
Sonatine	.08	.80	6.00
Veilchenblau	.07	.65	4.50

GLADIOLUS MIXTURES

MANNS' SPECIAL VARIETY MIXTURE:

25 Bulbs (mixed) 1 of each listed **$1.35.**
100 Bulbs (mixed) 4 of each listed **$4.15.**
100 Bulbs, in multiples of 10, your selection at 100 rates.

MANNS' SUPERIOR RAINBOW MIXTURE: Made up of varieties which because of their commercial value and reliable flowering qualities are being produced in such large quantities that low prices are made possible.
25c per doz.; $1.85 per 100

ROSE BUSHES

POTTED—WINTER HARDENED

These roses are ready to bloom when planted out in May, and will give maximum results. They were freshly dug last Fall and potted at once, preserving all their vitality. During the Winter they have been developing in cold frames to be planted, pot and all, in the field during March. Their growth has been natural and they should not be confused with bushes which have been forced for cut flowers all Winter.

Place your order early while complete assortment is available.

U. S. PLANT PATENTED NOVELTIES

	Price
ALICE HARDING (202) Golden yellow with carmine	$1.50
BETTER TIMES (23) Cerise-red	1.00
COUNTESS VANDAL (38) Pink with salmon glow	1.00
DICKSON'S RED (Patent Pending) Scarlet red	1.50
ECLIPSE (172) Rich gold	1.25
HECTOR DEANE (Patent Pending) Crimson, Orange	1.50
McGREDY'S SUNSET (Patent Pending) Orange, yellow	1.50
McGREDY'S TRIUMPH (190) Cerise flushed orange	1.25
MISS AMERICA (264) Flesh with salmon and gold	1.00
R. M. S. QUEEN MARY (249) Salmon, pink, orange	1.50
SIGNORA (201) Orange red	1.25
DOUBLOONS (152) Climber, saffron yellow	1.50
FLASH (1940 1st Award) Climber, luminous orange-scarlet	1.00
NEW DAWN (1) Climber, pink	1.50
JUNE MORN (Patent Pending) Climber, red, yellow	2.00

SELECT POTTED EVERBLOOMING HYBRID—TEA

85c each. $8.50 Per Dozen

AUTUMN. Orange-red.
BETTY UPRICHARD. Salmon-pink.
BRIARCLIFF. Rose-pink.
BUTTERCUP. Apricot-yellow.
CALEDONIA. White.
CATHERINE KORDES. Scarlet.
CYNTHIA. Oriental red.
DAME EDITH HELEN. Pink.
EDITH NELLIE PERKINS. Cerise-orange.
E. G. HILL. Scarlet.
ETOILE DE HOLLAND. Crimson-red.
GAIETY. Orange, red, silver.
GIPSY LASS. Scarlet, crimson.
GOLDEN DAWN. Yellow.
GRUSS AN TEPLITZ. Velvety crimson.
HEINRICH WENDLAND. Red, golden-yellow.
KILLARNEY BRILLIANT. Rosy carmine.
KILLARNEY DOUBLE WHITE. White.
LADY ALICE STANLEY. Rose, pink.
LADY MARGARET STEWART. Yellow, orange, scarlet.
LOS ANGELES. Pink, gold.
MARGARET McGREDY. Red, gold.
MAX KRAUSE. Golden yellow.
McGREDY'S IVORY, Creamy white, yellow base.
McGREDY'S SCARLET. Red.
MISS ROWENA THOM. Rose pink.
MME. EDOUARD HERRIOT. Coral-red, yellow.
MRS. ERSKINE PEMBROKE THOM. Yellow.
MRS. HENRY MORSE. Pink-yellow.
MRS. P. S. DUPONT. Golden yellow.
MRS. SAM McGREDY. Scarlet orange.
OPHELIA. Salmon, yellow base.
PADRE. Scarlet, flushed yellow.
PORTADOWN FRAGRANCE. Orange, scarlet.
PRESIDENT HOOVER. Scarlet, yellow.
RADIANCE. Carmine pink.
RED RADIANCE. Red.
ROSE MARIE. Rose-pink.
TALISMAN. Scarlet orange, yellow.
VILLE DE PARIS. Yellow.

CLIMBING HYBRID—TEA

K. A. VICTORIA. White.
LADY ASHTOWN. Rose pink.
RED RADIANCE. Bright cerise.
MARECHAL NIEL. Golden yellow.

AZALEAS

AMONEA. Late flowering rosy-crimson, 8 to 10 in. heavy, $1.25 each.

CALENDULACCA—(Flame Azalea). The most showy Azalea; bears flame-red or orange-yellow flowers before the leaves appear, 10 to 12 inches, $2.00 each.

HINODEGIRI. Beautiful brilliant red, 8 to 10 in. heavy $1.50 each.

MOLLIS—(Chinese Azalea). Thrives in sunny positions, bearing masses of flowers in various shades of red, yellow and orange, 15 to 18 inches, $3.50 each.

NUDIFLORA — (Pinxter Bloom). Handsome, early, free flowering, deep pink species, 15 to 18 inches, $2.50 each.

RHODODENDRONS

CATAWBIENSE. The most showy Rhododendron, grows 4 to 6 ft.; hardy, vigorous and free-flowering, producing a gorgeous display of lilac purple blooms in May and June. 18 to 24 inch, B. & B., $4.00 each.

MAXIMUM. The Great Laurel of the Mountain, attains a height and width of 10 ft. Flowers white to pale pink blooms in June and July. Most beautiful foliage of all Rhododendrons. Very suitable for bold mass planting. 18 to 24 inch transplanted clumps, B. & B., $3.00 each.

FLOWERING TREES

PINK FLOWERING DOGWOOD—(Cornus Floida Rubra). Beautiful rose pink flowering tree making a lovely contrast with the more common white variety. 18 to 24 inches, $1.50; B. & B., 3 to 4 ft., $4.50; 4 to 5 ft., $6.00.

JAPANESE FLOWERING CHERRIES. Double (30 ft.). Kwanzan, deep pink. 5 to 6 ft., $3.00 each.

MAGNOLIA GLAUCA. (Sweet Bay) (20 ft.), 2½ to 3 ft., B. & B., $3.50.

HEDGE PLANTS

BARBERRY

THUNBERGI. Popular for mixing in the shrubbery border, as single specimens, or for planting in clumps on the lawn, as well as for foundation plantings and for hedges. 3 yr. 12 to 15 in., $1.50 per 10; $10.00 per 100; 15 to 18 in., $2.00 per 10; $15.00 per 100.

CALIFORNIA PRIVET. 12 to 18 in., $4.00 per 100; 18 to 24 in., $5.00 per 100.

DAHLIAS

Exhibition, Garden and Cut Flower Varieties

Dahlias do well in almost any kind of soil, but thrive best in a medium loam. The tubers should be planted in a horizontal position, with the sprout up and about four inches below the surface; they should be set three or four feet apart each way, in deeply spaded soil. Mulch with peat moss and allow only one shoot to stand. A good plant food applied just as the buds start to form will increase the size and improve the color of the blooms. If large exhibition blossoms are desired, it is absolutely necessary to disbud. After the frost has killed the flowers, the roots should be removed from the ground, allowed to dry for two or three days, and then stored away in peat moss in a cool, dry, dark place, where frost will not reach them.

KEY. C—Cactus. IC—Informal Cactus. SC—Semi Cactus. ID—Informal Decorative. FD—Formal Decorative.

BALLEGO SURPRISE—(SC). White. **Plants 50c.**

CALIFORNIA IDOL—(ID). Large yellow. **Plants 50c.**

DISCOVERY—(ID). Purple, good bloomer. **Roots 75c.**

DULCINEA—(C). Bright red. **Roots 75c.**

EDNA FERBA—(SC). Coral to old gold. **Roots 35c.**

ELEANOR WISE—(FD). Deep red. **Plants 50c.**

FRECKLES—(FD). Variegated yellow splashed red. **Roots $2.00.**

JANE COWL—(ID). Bronzy buff and brilliant gold. **Roots 25c.**

JERSEY'S BEAUTY—(FD). Eosine pink. **Roots 25c.**

JERSEY'S DAINTY—(C). White tinged lavender. **Roots 35c.**

KATHLEEN NORRIS*—(ID). True rose pink. **Roots 35c.**

KENTUCKY SUN—(FD). Clear yellow. **Plants 50c.**

LORD OF AUTUMN—(ID). Lemon yellow. **Roots $1.00.**

MILTON J. CROSS—(ID). Lemon yellow and rose. **Roots 75c.**

MONMOUTH CHAMPION—(FD). Brilliant orange flame. **Roots 75c.**

MRS. BRUCE COLLINS—(C). Light lemon yellow. **Roots 50c.**

MRS. GEORGE LE BOUTILLIER—(ID). Carmine red. **Roots 50c.**

MURPHY'S MASTERPIECE—(ID). Crimson red. **Roots 50c.**

OAKLEIGH MONARCH—(FD). Red. **Plants 50c.**

PRIDE OF AUSTINBURG—(ID). Pink and orange. **Roots 75c.**

ROBERT RIPLEY—(ID). Lavender. **Plants 75c.**

ROYAL PURCHASE—(IC). Yellow. **Plants 50c.**

SON OF SATAN—(C). Bright scarlet. **Roots $1.00.**

VOLCANO—(FD). Orange. **Roots $1.00.**

WHITE WONDER—(ID). White. **Roots 25c.**

MINIATURES

NAMED VARIETIES

Plants 25c each.

DAD'S FAVORITE—A winner at the Baltimore Dahlia Show. Bright scarlet and gold. **Roots $1.50; plants 50c.**

POMPONS

Plants Assorted $1.50 per dozen.

PLEASE NOTE

Special unnamed large varieties worth from 50c to $2.50 each. **Roots 25c each; $2.50 per dozen.**

EVERGREENS

These Evergreens have been grown at our proving grounds and are priced low for such high quality material. All are burlaped and balled for safe transplanting.

ARBORVITAE (Thuja)

AMERICAN. A quick compact, pyramidal, grower for house foundation groups. 3 to 4 ft. $2.00.

PYRAMIDAL. A perfect pyramid, densely branched, very slow grower that needs no shearing. 2 to 3 ft. $2.50; 3 to 4 ft. $3.50.

GLOBE. A charming little evergreen that is an almost perfect ball, it seldom reaches over 3½ ft. 2½ to 3 ft. $3.00.

GOLDEN GEO. PEABODY. A clear yellow color in the springtime, very compact habit of growth. The flattened leaf clusters face outward edgewise, presenting a beautiful surface of vertical fluted lines. 2½ to 3 ft. $2.50.

JUNIPERS

IRISH—(Communis Hibernica). Symmetrical spiral grower, silvery green foliage. Makes perfect specimen without pruning. 2 to 2½ ft. $1.50; 2½ to 3 ft. $2.00.

GREEK—(Excelsa Stricta). It assumes a broad compact pyramid, of a delightful bluish green silver tipped foliage, very slow growing. 2 to 2½ ft. $2.50.

PFITZERS. A graceful broad evergreen with sweeping fronds of greenish-blue foliage. It thrives under almost any condition. 1½ to 2 ft. spread $3.00; 2 to 2½ ft. spread $4.00; 2½ to 3 ft. spread $5.00.

ANDORA—(Communis Depressa). A low spreading Juniper. It seldom raises its branches over 18 inches off the ground, the extremities curve upward. Ideal for hillside planting. Spread 2 to 2½ ft. $2.00; 2½ to 3 ft. $2.50.

RETINOSPORAS (Chamaecyparis)

These belong to the Japanese Cypress family and embrace some of the most beautiful evergreens in cultivation.

OBTUSA. A neat pyramidal tree which develops quite rapidly into a symmetrical pyramid. The foliage is of dark green color above and silvery beneath. 2 to 3 ft. $2.50; 3 to 4 ft. $3.50.

PLUMOSA. Useful for hedges and formal work. Is of a tall pyramidal shape with firm green foliage. 4 to 5 ft. $4.50.

SQUARROSA—(Veitch's Moss Cypress). The distinctive silvery-blue foliage makes it very desirable as a lawn specimen or for color contrast in groups. Pyramidal in habit very dense in branch structure. 2½ to 3 ft. $2.00; 3 to 4 ft. $3.00.

SPRUCE—PICEA

COLORADO BLUE—(Picea Pungens Glanca). It has steel blue foliage glistening throughout the summer and winter. Seeds sown from the very best strain produces but a very small percentage of blue specimens, which accounts for the high price. 3 to 4 ft. $4.00; 4 to 5 ft. $5.00.

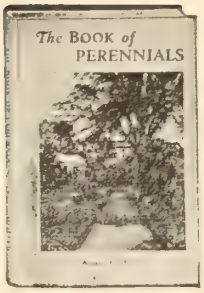
KOSTER BLUE SPRUCE. This is a grafted variety and undoubtedly is the bluest of all evergreens. Rather high in price but very valuable as a specimen on the lawn. 24 to 30 inches $4.00; 2½ to 3 ft. $5.00.

NORWAY—(Picea Excelsa). A tall picturesque, hardy, rapid growing tree, graceful in all its lines. Used extensively as specimens. 2 to 3 ft. $1.50; 3 to 4 ft. $2.50.

GARDEN BOOKS

1001 Garden Questions Answered

By A. C. Hottes. For the amateur gardener who wishes some information on every phase of gardening on his own place. Discusses flowers, fruits, vegetables, pruning, planting, fertilizers, diseases, pests, propagation, soil, lawns, paths, trees, shrubs, etc. Cloth, **$2.00**, postpaid.



THE BOOK OF ANNUALS

By A. C. Hottes. Complete information on over 100 genera of annual plants, everlastings and vines. Care, culture, diseases, etc. 182 pages, 155 illustrations. Cloth, **$1.50**, postpaid.

ALL ABOUT FLOWERING BULBS

By T. A. Weston. Complete information on spring flowering, tender flowering and summer flowering bulbs and roots. 186 pages, 8 color plates and 68 halftones. Cloth, postpaid, **$2.00**.

FLOWERS OF THE WILD

By F. C. Pellett. Covers most of the common wild flowers suited for naturalization in the Northeastern States and the best of them from the West. 168 pages, 4 color plates and 104 halftones. Cloth, **$1.00**, postpaid.

GARDEN GUIDE

Each subject written by an expert in that line. Discusses all phases of gardening pertaining to the owner of a moderate-sized home. 576 pages, 300 illustrations. Cloth, **$2.00**, postpaid.

THE BOOK OF PERENNIALS

By A. C. Hottes. Complete information on over 140 genera. Discusses care, culture, propagation, fertilizers, diseases, etc. Gives pronunciation under each genera. 280 pages, 103 illustrations, numerous tables. Cloth, **$2.00**, postpaid.

ROCK GARDEN PRIMER

By A. Thornton. For the amateur who wishes practical information on every minute point in the construction of a rock garden. 152 pages, 4 color plates, 70 illustrations. Imitation leather, $1.50, postpaid.

THE BOOK OF SHRUBS

By A. C. Hottes. Covers from description to complete care and culture of all the common and some uncommon deciduous shrubs and broad-leaved evergreens. Exceptionally complete. 448 pages, 187 illustrations. Cloth, **$3.00**, postpaid.

PRACTICAL VEGETABLE CULTURE

By A. E. Wilkinson. For everyone wishing to grow vegetables for home consumption or profit. 308 pages, 135 illustrations. Cloth, **$2.00**, postpaid.

WATER GARDENS AND GOLDFISH

By R. V. Sawyer and E. H. Perkins. Two closely related subjects presented under the same cover—for those wishing a small tub-pool to the large formal pool. Cloth, **$2.00**, postpaid.

THE GARDENER, by L. H. Bailey. You get full advantage of Dr. Bailey's unequalled knowledge and experience in this book. It tells how to grow flowers, vegetables, and fruits from the time of planting through to maturity. Special articles on different types of gardening. Information that is easy to find and simple to use. 116 illustrations, 260 pages. **$2.50**

AROUND THE YEAR IN THE GARDEN, by F. F. Rockwell. Because the time when you do your garden work is so important, you need a regular schedule. This book gives you complete information on every garden problem, outlined week by week, and written by a practical gardener. 88 illustrations, 350 pages. **$3.00**

THE STANDARD CYCLOPEDIA OF HORTICULTURE, edited by L. H. Bailey. This is the one universal and invaluable authority on every horticultural question. Makes a compact but thorough presentation of the kinds, characteristics and methods of cultivation of the plants grown in the United States and Canada for ornament, for fancy, for fruit, and for vegetables. Formerly in 6 volumes, but now in three at about half the original price. 5,000 illustrations, 3,637 pages, 3 volumes, fabrikoid binding. **$15.00**

HOME FLOWER GROWING, by E. C. Volz. A real flower garden encyclopedia! It will teach you how to propagate and cultivate your plants, how to care for, fertilize, and maintain them. It tells how and when and where to grow flowers; what different kinds look like; how to plan indoor, outdoor, rock, and water gardens; how to prepare exhibits for a flower show; how to organize a garden club. 151 illustrations, 364 pages. **$3.00**

GARDEN MAINTENANCE, by Ortloff and Raymore. How to prune, fertilize, spray, and care for flowers, trees, shrubs, and lawns. This is a book written for the home owner who already has a lawn and garden space; it does not presuppose a new garden or the complete rearrangement of existing plantings. **$2.50**

HOW TO GROW ROSES, by Pyle and McFarland. Makes every step in the culture and care of roses so clear that any grower can understand it and succeed with them. A completely re-written edition of America's most popular rose book. 211 pages, 138 illustrations, including 45 varieties illustrated in color. **$1.00**

Dahlias, by F. F. Rockwell	1.25
The Outdoor Living Room, by Ramsey & Lawrence	2.50
Gladiolus, by F. F. Rockwell	1.25
Perennial Gardens, by H. S. Ortloff	1.25
Adventures In A Suburban Garden, by L. B. Wilder	2.00
Roses, by Rockwell	1.25
The Book Of Bulbs, by Rockwell	2.50

Books for better Gardens

SPRAY GUIDE

HOW TO GUARD YOUR FLOWER AND VEGETABLE GARDEN

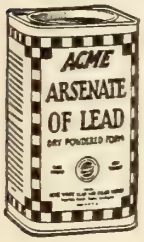
INSECT OR DISEASE	DESCRIPTION	MATERIAL TO USE (See List)	WHEN TO APPLY
Anthracnose	A common disease recognizable from dusky white spots on stems with brown spot on leaves.	**B—Q**	Make first application when growth starts in spring. Repeat weekly until plants start blooming.
Ants	Sweet or grease eating.	**Antrol**	When ants appear.
Aphis	Small green, red or black lice feeding on the tender terminal growth of many plants.	C—E—X	When pests first appear. Wet insects thoroughly. Repeat as necessary.
Asparagus Beetles	Olive colored, both adults and grub like larvae.	**A—E—N—S—X**	When grubs first appear, preferably when plants are wet with dew.
Bag Worm	Builds ½-inch to 2-inch tapering bag-web.	**A—M—P—X**	When insects first appear or when evidence of feeding is observed. Repeat as needed.
Black Rot	(Grapes) Fungus disease. Shows first as small white spots, later surrounded by brown ring.	**B—F—G—L—Q**	When leaf buds first open. When shoots are 10 to 15 inches long. Just after blossoms fall.
Blights	Bacterial disease that attacks young shoots and leaves, causing brown or black spots and sudden wilting.	**B—F—Q**	Make first application when growth starts in spring. Repeat weekly until plants start blooming.
Brown Canker	Disease which develops small purple spots on stems and leaves of roses, later turning to light center with purple margin.	**B—F—Q**	As above.
Cabbage Looper Cabbage Worm	Pale green-white, striped caterpillar. Doubles or loops as it crawls.	**A—E—N—S—X**	When larvae first appear.
Caterpillars	Wooly or naked. Feed on leaves.	**A—E—M—P—S—X**	When insects first appear or when evidence is observed. Repeat as needed.
Celery Leaf Tier	Pale green or green striped caterpillars.	**A—E—P—X**	When first appears.
Corn Earworm	Green worm which eats into ears of corn.	**A—M—P—S**	Apply to silk when it first shows through the tips of each ear. Repeat two or three times within week.
Cucumber Beetles	Yellow and black striped.	**A—E—N—S—X**	When vines begin to run. Repeat at frequent intervals.
Currant Worm	Green leaf-devouring worm.	A—E—P—S—X	When pests appear.
Cut Worms	Destroy plants by cutting stems.	**Snarol**	When first appear.
Damping Off	Causes plants to suddenly wilt as though rotted at the ground level.	**Cuprocide Semesan Formaldehyde**	Treat seed or soil.
Downy Mildew	White, downy mold on pods of lima bean, or under side of melon leaves.	**B—F—S**	At weekly intervals.
Grape Berry Moth	Lays eggs from which small worm develops in fruit.	**E—S**	Just after blossoms fall. Repeat at monthly intervals until July.
Grapevine Flea Beetle	Dark brown larvae.		
Grape Root Worm	Grayish brown beetles.		
Horn (Tomato) Worms	Large green worms.	**A—E—N**	When bugs or worms first appear.
Japanese Beetles	Bronzy-green about ⅜ inch long.	**J**	When first appear.
Leaf Beetles	Yellow beetles with twelve spots on wings.	**A—E—N—S—X**	When pests first appear. Repeat at weekly intervals.
Leaf Hoppers	Small greenish insects that suck plant juices.	**C—E—N—X**	When pests first appear. Repeat as necessary.
Leaf Spot	Fungus disease causing brown spots on leaves.	**B—F—Q**	Repeat at intervals.
Mealy Bug	White, cottony appearance.	**E**	Every few days until under control.
Mexican Bean Beetles	Copper-colored beetles with eight black spots. Cream-colored larvae, which also devour leaves.	**D—E—K—M—N—S**	When pests first appear.
Potato Bug or Blister Beetles	Gray, black or striped beetles up to ¾ inch long.	**A—P—X**	Spray or dust plants as soon as they break through and every ten days thereafter.
Powdery Mildew	White growth on leaves.	**B—F—Q**	When white growth makes its appearance.
Red Spiders	Small mites that feed on foliage, causing it to assume a rusty appearance.	**E—T**	When pests first appear; on strawberry use Strawberry Dust (85-15).
Rose Beetle	Long-legged clay-colored beetles on roses and peonies.	**A—E—S—X**	When pests first appear. Repeat at weekly intervals.
Rust	Orange-colored pustules (fungus) in streaks or patches on leaves or stems.	**B—Q—V**	When first appears, or early and weekly as a preventative.
Scab Spot	Fungus disease causing black spots on leaves.	**B—F—Q**	Begin when leaves are size of mouse ears and repeat every ten days or two weeks.
Scale	Attacks bark of tree.	**L—R**	As late dormant spray.
Scurfy Scale	Gray, pear-shaped scale.	**O**	When first appears.
Thrips	Tiny winged or wingless insects that rasp leaves and suck juices from plants.	C—E—X	When pests first appear. Repeat as necessary.
Tussock Moth	Caterpillar 1½ inches long. Red head. Has tufts of yellow, red, black and white hairs.	**A—E—P**	When insects first appear or when evidence is observed. Repeat as needed.
White Flies	Small whitish flies. In larval stage, tiny, scale-like, greenish objects.	**E—O**	When pests first appear. Repeat as necessary.

LIST OF MATERIALS INDICATED IN ABOVE CHART

A—Arsenate of Lead.
B—Bordeaux, Kopper King, Kopper Queen
C—Aphis Spray, Black Leaf 40
D—20-20-60 Dust.
E—*D-X Evergreen, Red Arrow and Rotecide
F—Dusting Sulphur Fungtrogen.
G—Grape Dust.
J—Acme Japanese Spray, D-X and Japtox.
K—Dutox.
L—Lime and Sulphur Solution.
M—Garden Guard, Magnesium Arsenate.
N—*Rotenone Dust.
O—*Fish Oil Soap.
P—Paris Green, Red River Potato Mix
Q—Sulfocide.
R—Scalecide.
S—*Slug Shot.
T—Emo, Emo-Nik and Selocide.
V—Volck.
X—Nicotine-Pyrox.

Materials marked (*) are non-poisonous when used as directed. Pyrethrum and Rotenone base materials such as Evergreen, Red Arrow and Rotecide are contact sprays and must strike the insects to be effective.

ACME INSECTICIDES & FUNGICIDES



ARSENATE OF LEAD

For fruit trees, vegetables, bushes and tobacco. Can be used as dust or spray. To control Japanese Beetle grub on lawns apply 1 lb. to 100 sq. ft. **1 lb. 30c; 4 lb. 70c.**

ARSENITE OF ZINC

Ranks next to Paris Green in strength, and the new formula being produced by Acme is greatly improved in physical character. It has gained considerable popularity in certain sections for use on potatoes and other hardy ground crops to destroy chewing insects. Mixes well with Lime Sulfur solution which is used to combat psyllid on potatoes. **1 lb. 35c; 4 lb. 80c.**

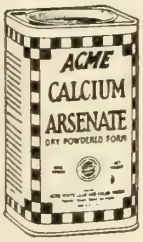
BORDEAUX MIXTURE

Prevents large losses caused by blight, rot, mildew, scab, anthracnose and certain other fungous diseases. It stimulates plant growth and greatly increases the harvests. **1 lb. 30c; 4 lb. 65c.**

KOPPER KING

(Basic Copper Sulphate). **1 lb. 35c; 4 lb. 85c.**

CALCIUM ARSENATE



Calcium Arsenate is the cheapest arsenical insecticide on the market but of great economy and efficiency for certain purposes. The accepted dust for boll weevil poisoning on cotton; also recommended to combat chewing insects on potatoes, vegetables, cotton and certain fruit trees. **1 lb. 25c; 4 lb. 45c; 24 lb. $2.50.**

PARIS GREEN

A rich, emerald color and of fine fluffy physical character. Containing 55% arsenious oxide, it will give quickest control where extreme measures are necessary.
¼ lb. 18c; 1 lb. 50c; 5 lb. $2.25; 14 lb. $5.00.

Acme Spraying Guide—Free

GARDEN GUARD

Contains no arsenic or fluorine compound. The killing ingredient is Rotenone. Non-injurious to humans and warm-blooded animals yet effective both by contact and as a stomach poison against insects. Especially recommended for use on broccoli, cabbage, cauliflower, Brussels sprouts, string beans, currants, and sweet corn. A favorite of the housewife for dusting roses and flower gardens. Controls lice, fleas and mites on dogs, cats, birds, and chickens. **1 lb. sifter carton 35c.**

DUSTING SULPHUR
(An Excellent Chigger Chaser)

An improved dusting sulphur for home use which can also be used as a liquid spray. Recommended to control mildew, leaf spot, black spot and rust on rose bushes, chrysanthemums, snapdragons, carnations, and certain other foliage; also red spiders on evergreen. 98% passes through 325 mesh screen. **2 lb. carton 25c.**

LIME SULPHUR

A standard 33° Beaume lime and sulphur converted into a dry powder but having all the effectiveness of the liquid product when dissolved in water.

For use in dormant spraying against scale, peach blight, leaf curl and twig borer. Summer spraying against scab, soot, blotch, red spired and mite. **1 lb. 30c.**

APHIS SPRAY

An improved nicotine spray combining a soft spray soap with Black Leaf 40, suitable for the control of all kinds of aphis (plant lice), thrip, leaf hopper and many more hardy insects infesting rose bushes, flowers, shrubs, vines, bushes and trees. Mixes easily with any kind of water. Complete directions found with every package. **3-oz. tube 35c; 12-oz. tube 95c; 2½-lb. can $2.25.**

RED RIVER POTATO MIX
(Special Formula for Potatoes Only)

A scientific development combining a new patented copper fungicide with quick-killing arsenic. Kills potato bugs quicker, drives off flea beetle and leaf-hopper, prevents blight from gaining a foothold, stimulates foliage, making more and better potatoes. Complete control in one operation—at one cost. Use as a dust or spray. **1-lb. bag 30c; 4-lb. bag 80c.**

EMO

A summer oil spray of fine quality, safe to use, pleasant to handle and of the much desired flowable consistency. Recommended as a contact spray in the control of White Flies, Rust Mites, Blister Mites, Mealy Bugs, Red Spiders, certain scale, and other insects. **8 oz. 30c; Pt. 50c; Qt. 70c; Gal. $1.95.**

EMO-NIK

Complete contact spray combining nicotine in its most active form with Emo a summer oil emulsion. **4½ oz. 35c; Pint 65c; Quart 95c; Gallon $2.50.**

KOPPER QUEEN
(Mildew Spray)

A strong liquid copper spray for the control of mildew, leaf spot, and black spot on rose bushes, flowers, and many other kinds of foliage. Stainless, leaves no unsightly residue which detracts so much from the appearance of flowers and ornamentals in your yard. Use as a liquid spray replacing Bordeaux Mixture and Sulphur. **½ Pt. 35c; Pt. 60c; Qt. 90c; Gal. $2.25; 5 Gal. $7.50.**

Protect that evergreen—keep dogs away. Remove cap and hang tube of Dawg-Gone (opening down) in the lower branches of trees at the points of approach. Not necessary to place tube in every tree unless standing alone. The odor slowly emanating from the open tube will keep dogs at a distance—replaces unsightly wire screens or mechanical contrivances. **Tubes 25c each.**

DUSTING AND SPRAYING MATERIALS

ANTROL DESTROYS ANTS IN THEIR NESTS

New Method "Gets" Them at Their Source—Safe, Permanent, Effective

The Antrol system is adapted to any size house or garden, composed of small glass containers and a special formula of syrup. The ants smell the syrup, eat it and then transmit its mild poison to the queen in the nest. Soon the entire ant colony is destroyed!

Prices—Antrol sets containing 4 containers and 1 4-ounce bottle of syrup, 75c; Antrol syrup, 4-ounce bottles, 35c; pints, 85c.

"READY FILLED" ANTROL SET

Consists of four patented glass feeders filled with regular Antrol Syrup, ready for use. Set 40c.

Individual Ready Filled Feeders, 10c each. Not Mailable.

BORDEAUX-ARSENATE OF LEAD

3 to 7 pounds to 50 gallons of water. To kill leaf-eating insects and control fungous diseases; a double purpose spray in one application. **Lb., 25c; 4 lbs., 85c; 100 lbs., $13.50.**

MECHLING'S JAPTOX
POSITIVE CONTROL FOR JAPANESE BEETLES
KILLS REPELS

(One pound makes 10 gallons.) Specialized spray for killing and repelling Japanese Beetles. **Lb., 50c.**

ACME JAPANESE BEETLE SPRAY

(One pound makes 20 gallons) 75c lb.

BEETLE TRAPS
(Jar not included)

No. 4 Trap	$1.00
Liquid Bait	.40
No. 0 Trap	.35
Dry Bait	.15
Galv. Rods	.30
Perforated Cages 2 qt. capacity	.35

No. 4 No. 0

BLACK LEAF 40

Kills Aphis, Thrips, Leaf Hoppers and

other insects on garden, farm and orchard crops by contact and fumes—an advantage not possessed by non-volatile, non-poisonous spray materials.

Also Kills Poultry Lice . . .

Merely paint tops of perches with "Black Leaf 40." Body heat from roosting birds creates fumes which penetrate feathers and kill lice and feather mites.

Oz., 35c; 5 ozs., $1.00; 1 lb., $2.25; 2 lbs., $3.25; 5 lbs., $5.85; 10 lbs., $10.60.

CARBOLA

Carbola applied to the walls, ceilings, partitions, nests, etc., of your poultry houses will help to prevent contagious diseases among your flock. It will aid in keeping your fowls free from profit-destroying ravages of lice and mites. 5 lbs., 60c; 10 lbs., $1.00; 50 lbs., $3.50.

CARBOLINEUM—AMERICA

Kills chicken mites and blue bugs in poultry houses, makes wood Termite proof and Stops Rots. **Qt., 45c; gal., $1.50; 5 gals., $6.00.**

CARBON DI-SULPHIDE

Specified by U. S. Dept. of Agriculture for treatment of soils to destroy grubs of the Japanese Beetle.

Also used for control of insects in grain.

Lb., 40c; 5 lbs., $1.35; 100 lbs., $11.00. Plus deposit on Drum.

CORONA COPPERCARB

Grow clean wheat free from bunt or stinking smut and receive top prices for your crop. Corona Coppercarb is a dust recommended by experimental stations to be applied dry to seed wheat any time before sowing. Use 2½ to 3 ounces per bushel of wheat. 5 lbs., 90c.

CROW REPELLENT

NO-CROW—Treat corn and other seeds to repel crows, birds, moles, etc. Economical and easy to use. Liquid, ½ pt. **60c; pint $1.00.**

PESTOX—Powder, 1 lb. treats 1 bu. seed corn. Easy to use. **lb. 35c.**

CUPROCIDE *will Save your Seeds*

Prevents seed decay and "dampening off"; may be used on both vegetable and flower seeds. Assures profitable stands under adverse conditions. Use 4 oz. to 2½ lbs. per 100 lbs. of seed. **4 oz. 35c; 1 lb. 90c; 5 lbs. $4.00.**

CUPROCIDE 54Y — Controls certain foliage diseases. A fungicide plant spray which protects seed bed soil and seedlings from "dampening off." **3 lb. pkg. $1.11.**

CYANOGAS
UNIVERSAL PEST DESTROYER

A—To kill ants, rats, moles, fleas, bed bugs, moths, bats, grape mealy bugs, melon Aphis. ½-lb. tin, 45c; 1 lb., 75c; 5 lbs., $3.00.

G—For greenhouse, bulb, grain, soil, household, warehouse fumigations. 5 lbs., $3.00; 25 lbs., $10.00.

D-X SPRAY

Powerful non-poisonous spray for both sucking and chewing insects. **1½ oz. 35c; ½ pint $1.15; quart $3.25.**

20—20—60 DUST

Arsenate—Copper—Lime
$7.00 per 100 lbs.

DOW'S MAGNESIUM ARSENATE

Magnesium Arsenate (pure) 2-lb. pkg., 60c; 100-lb. drum, $22.00.

Magnesium Arsenate Dust Mixture, 4-lb. pkg., 60c; 100-lb. drum, $12.00.

DUTOX

A non-arsenical insecticide for killing Mexican Beetles, Cabbage and Tomato Worms, etc. **Lb., 25c; 6-lb. bag, $1.25; 100 lbs., $18.00.**

DUBAY

SEED DISINFECTANTS

These effective seed disinfectants are sold by the Bayer-Semesan Company, a consolidation of E. I. du Pont de Nemours & Company, Inc., and The Bayer Company, Inc. They comprise the following products:

SEMESAN—For vegetable and flower seeds. One ounce to 15 to 30 lbs. seed. 1/3 oz., 10c; 2 oz., 35c; lb., $2.25; 5 lbs., $9.90.

SEMESAN, JR.—For corn. 2 ounces to 1 bushel corn. 2 oz., 15c; 4oz., 30c; 1 lb., 75c; 5 lbs., $3.25.

SEMESAN BEL—For potatoes. 1 lb. to 60-80 bu. potatoes. 4 oz., 45c; 1 lb., $1.50; 5 lbs., $6.75.

CERESAN—For grains. 2 to 3 ozs. for 1 bu. seed. 1 lb., 70c; 5 lbs., $3.00.

NEW CERESAN—For wheat. ½ oz. for 1 bu. seed. Lb., 70c; 5 lbs., $3.00.

ETHYLENE DICHLOROIDE EMULSION

(For control of peach borer)

Apply by pouring or spraying on soil surrounding the tree and on lower part of the trunk. **Five gallons (sufficient for 54 to 720 according to age), $7.50; 50 gallons, $1.00 per gallon.**

NEW EVER GREEN SPRAY

A NEW SIMPLE WAY TO KILL GARDEN INSECTS

No complicated instructions. Simply buy New Ever Green Spray, mix with water—and spray. This perfected pyrethrum spray kills both chewing and sucking insects. Harmless to man, plants and animals.

1-oz. bottles, 35c; 6-oz. bottles, $1.00; 16-oz. bottles, $2.15; 1-gal. bottles, $12.20.

FISH OIL SOAP

Keeps trees, plants and vines clean and healthy, effectively controlling sucking insects and many forms of scale. **Price, 1 lb., 35c; 5 lbs., $1.25.**

KOPPER SHIELD PRUNING PAINT

Forms a protective shield while the tree is recovering from wounds left by pruning, storms or accidents, and helps to prevent diseases. **½ pt., 25c; pint, 40c; quart, 65c; gallon, $2.00.**

FORMALDEHYDE

Extensively used in the preparation of potatoes for seed, as a preventative against potato scab and to destroy other germs on the seed. Will also control some forms of grain smut. For potatoes a solution of 1 pint to 15 or 20 gallons of water is made and cut pieces are soaked for 2 hours. One to two gallons of this will be sufficient for 1 bushel of seed. Pt., 50c.

FORMACIDE
FORMALDEHYDE DUST

Is a seed and soil treating compound which controls seed borne diseases and when applied to the soil controls "damping off" and other root rots of vegetable and flower seedlings. Usually applied 1 lb. per 10 sq. ft. 1 lb., 75c; 5 lb. can, $2.00.

FUNGTROGEN

An effective and scientific preventive and remedy for mildew, black spot and many fungus diseases of Roses and other plants. Dilute one part to 60 parts water. ½ pt., 75c; pint, $1.25.

GRAPE DUST

A readily diffusible, light weight powder fungicide, very efficient in destroying mildews and preventing blights. 5 lbs., $1.25.

LEMON OIL

Soluble in water; will destroy Aphis, Rust, Scale, and Bugs on Palms, Ferns, Rose Bushes, etc. Highly recommended as a wash for dogs and other animals, destroying lice and relieving mange.

½ pt., 30c; 1 pt., 50c.; 1 qt., 85c.

LETHANE SPREADER

Used with Cuprocide and Cotton Seed Oil to control blue mold on tobacco. **Qt., 75c; gal., $1.80.**

LIME AND SULPHUR SOLUTION

1 qt., 40c; 1 gal., 75c; 5 gal., $2.50; 50 gal., $7.50.

DRY LIME AND SULPHUR

Dormant Season: 12 lbs. to 50 gallons.
Growing Season: 3 lbs. to 50 gallons.

1 lb., 30c; 12½ lbs., $1.50; 200 lbs., $20.00.

LORO

1 pint makes 50 to 125 gallons

A contact spray for control of aphids, thrips, red spider, mealy bugs, midge, lace bug, etc. Recommended especially for use on carnations and chrysanthemums. **Pt., $2.00; gal., $10.50.**

NAPTHALENE FLAKES

Used for sprinkling lightly over bulbs for protection against moles and field-mice. **20c lb.; 5 lbs., 75c; 100 lbs., $14.00.**

NICO-FUMELIQUID

Very powerful tobacco extract. Soluble in water. Guaranteed 40 per cent nicotine.

1-lb. tin, $2.25; 4 lbs., $5.75; 8 lbs., $10.00.

NICO-FUME

This is the strongest tobacco paper on the market. Does not injure blooms and furnishes the easiest method of fumigation ever devised.

Tin box of 24 sheets, $1.25; 144 sheets, $4.50; 288 sheets, $8.00.

"NICO-FUME" POWDER PRESSURE-FUMIGATOR

Improved quality; burns under pressure in special container; more effective and more economical than old methods. Use at approximate rate of 1 lb. per 20,000 to 30,000 cu. ft. of air space. 1 lb. size, 75c ea.; 6 for $3.75; 12 for $7.00; ½ lb. size, 45c ea.; 6 for $2.40; 12 for $4.20.

NICOTINE DUST

Extremely valuable for combating pea lice, aphis, etc.

100-lb. drum, $16.00.

POMO-GREEN

1 lb., 50c; 5 lbs., $1.75.

With Nicotine—1 lb., 75c; 5 lbs., $3.00.

PURE PARA-DICHLOROBENZENE

For Peach Borer Control

Very powerful and effective remedy just coming into general use as a result of the experiments of the Department of Entomology. Should be applied September 1st to October 10th, according to latitude. Some growers prefer to make two applications, the first being in the month of June. One pound is sufficient for 10 to 30 trees, according to size. It is not advisable to treat trees under 4 years of age with Para-Dichlorobenzene, and apple trees should never be treated.

1 lb., 40c; 5 lbs., per lb., 30c; 25 lbs., per lb., 22c; 100 lbs., per lb., 20c.

Pyrox kills bugs *—prevents* blights

ALL you have to do to keep your farm crops free from leaf-chewing insects and fungus diseases is this: Mix Pyrox with water and spray. No need to waste time and effort mixing Bordeaux and arsenicals.

We recommend Pyrox because it will not clog the smallest nozzle. It comes out a fine mist and covers the foliage completely, sticking to the leaves even through the hardest rains. Insects die. Blight is prevented. Your farm has a chance to show what it really can do for you! There is a size of Pyrox to suit every need!

Nicotine Pyrox

If you have a garden patch, you will want a jar of the new Nicotine Pyrox—Standard Pyrox treated with Nicotine. It not only kills leaf-chewing insects, prevents blight and other diseases, as Standard Pyrox does, but it also kills *sucking insects*, such as aphis, thrips and leaf-hoppers. Standard Pyrox, of course, is designed for most commercial crops, but in the garden, where sucking insects do so much damage, you will want Nicotine Pyrox.

Just mix **Pyrox** with water—and spray.

	Without Nicotine	With Nicotine
1 lb.	...	$ .49
5 lb.	...	1.75
25 lb.	$5.00	5.65
50 lb.	7.25	9.25
100 lb.	12.50	17.50
300 lb.	30.00	42.50

DUSTING AND SPRAYING MATERIALS (Continued)

1 oz. makes 8 gal.

Economical and efficient contact spray, non-poisonous, will not injure blossoms, foliage of fruit; positive death to all types of insects. Poison sprays only kill if eaten, while Red Arrow Pyrethrum Spray kills every insect it strikes. 1 oz., 35c; 4 oz., $1.00; 1 pt., $2.85. Grower—1 qt., $3.60; 1 gal., $10.70.

ROTECIDE
The Standard Rotenone Spray

1 oz., 35c; 8 oz., $1.00; pt., $1.75; quart can, $3.00; gallon can, $8.00.

NICO-ROTE—Nicotine Rotenone Quart, $4.00; gallon, $12.00.

ROTENONE DUST

Strictly non-poisonous and proven to be the most practical, effective and economical insecticide for the control of insects attacking vegetable crops. Contains ¾% Rotenone, plus all the toxic (killing) ingredients of the rotenone bearing roots. Should be used at rate of 15 to 25 lbs. per acre or as a spray 1 lb. to 10 gallons. 5 lbs., 65c; 25 lbs., $2.50; 100 lbs., $9.00.

S. E. C. OIL

A combination of Cotton Seed Oil and a special emulsifier. By adding Cuprocide you have an effective and safe spray for controlling blue mold on tobacco. Gal. $2.30.

SCALECIDE
—THE COMPLETE DORMANT SPRAY—

Prices—Qt., 65c; gal., $1.55; 5 gals., $5.50; 10 gals., $9.50; 15 gals., $11.25 (plus $2.00 deposit on drum); 30 gals., $18.50 (plus $2.50 deposit on drum); 50 gals., $26.00 (plus $3.00 deposit on drum). (Freight to factory to be deducted from refund.)

SELOCIDE

1 gallon makes 100 to 400 gallons. Kills Red Spider. Price, gal., $3.50.

SLUG SHOT

(Hammond's.) Guaranteed to destroy potato bugs, cabbage worms, lice, fleas, beetles, striped bugs, etc., on currants, egg plants, melons, turnips, beets, etc.; canker worms and caterpillars on fruit and ornamental trees.

1-lb. sifter, 25c; 5-lb pkg., $1.00.

Liquid—1 oz., 35c; 6 oz., $1.00.

SNAROL

A ready prepared bait meal that means sure death for cut-worms, snails, slugs, sowbugs, and other garden pests. Harmless to vegetation, safest to use, not affected by rain or sprinkling. 1½ lb. pkg., 35c; 4 lb. pkg. 85c. Not Mailable.

SPRAY CATALIZER

A combined adhesive and spreader, making spray materials more economical and effective, inexpensive. Use 2 pounds to each 100 gallons of spray. 2-lb. pkg., 45c.

STRAWBERRY DUST

85-15 Mixture successfully used for many years. 1 lb., 15c; 10 lbs., $1.00; 25 lbs., $2.25; 100 lbs., $6.50.

SULPHUR

Commercial Flour of Sulphur. 1 lb., 6c; 10 lbs., 50c; 25 lbs., $1.00; 100 lbs., $2.70.

Superfine Dusting Sulphur. 1 lb., 10c; 10 lbs., 70c; 25 lbs., $1.25; 100 lbs., $3.60.

DRITOMIC SULPHUR

4 lb. bags, 60c; 48 lb. bags, 12c per lb.; 96 lb. bags, 11c per lb.

SULFOCIDE
A Better Summer Spray

Sulfocide is a highly concentrated non-poisonous liquid sulfur fungicide—entirely distinct from lime-sulphur.

Prices — Pt., 50c; qt., 85c; gal., $2.25; 5 gals., $7.50; 10 gals., $13.50; 30 gals., $33.00; 50 gals., $50.00.

TAROCIDE

A very dependable dormant spray for trees, kills the eggs of aphis, red mite, pear psylla, scale insects, etc. Mix 1 to 20. 54 gallon drum, 30c gallon; 28 gallon drum, 32c gallon. (Plus $1.50 deposit on drum, returnable.)

TOBACCO DUST

Excellent insecticide and fertilizer combined, extensively used against black and green aphis, fleas, beetles, etc. Finely powdered and high in nicotine content.

1 lb., 10c; 10 lbs., 50c; 100 lbs., $3.50; ton, $50.00.

TOBACCO STEMS—Valuable as fertilizer and humus—10 lbs., 50c; 100 lbs., $2.50.

TRI-OGEN
The all-purpose spray

A highly concentrated insect spray and fungicide for garden and greenhouse plants. Stimulates plant growth and is harmless to foliage or blooms.

Small kit (makes 16 quarts), $1.50.
Medium kit (makes 64 quarts), $4.00.
Large kit (makes 32 gallons), $6.00.

TREE BANDING COMPOUND

ACME STOP—Used to band trees, shrubs and vines; prevents insects from crawling up to the foliage. 6 oz., 35c; 1 lb., 65c.

TREE TANGLEFOOT

Applied directly to the bark of trees, protecting them from climbing insect pests. Easily applied and will remain sticky for three months fully exposed to the weather.

1-lb. can, 65c; 5-lb. can, $3.00; 10-lb. can, $5.65.

VOLCK

For Safe and Sane Control of Nursery, Garden, and Greenhouse Insects

VOLCK is one of the most powerful insecticides known. Even mildews and rusts are prevented and stopped by VOLCK. Not only does VOLCK give effective control of pests, but it also prevents reinfestation for a considerable period; is odorless, colorless and non-poisonous.

Volck Does Not Burn the most tender foliage. Coleus, cyclamen, evergreens, ferns, orchids and many other types of plants can be sprayed with safety.

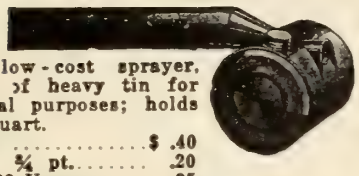
Prices — ½-pint cans, 35c; 1-quart cans, 75c; 1-gallon cans, $2.00; 5-gallon cans, $7.50.

WEEDEX
The SCIENTIFIC CHEMICAL WEED-KILLER

Easy and economical to use. One gallon of Weedex added to 49 gallons of water makes sufficient treating liquid to effectively cover about 1000 sq. ft. Successfully used in destroying weeds, wild grass, and undesirable growth on tennis courts, driveways, walks and gutters and will not injure or discolor marble, brick, cement or stone but cleans and brightens them. (Not Mailable). Qt., 50c; 1 gal. can, $1.50; 5 gal. can, $6.25.

SPRAYERS

THE "MISTY" SINGLE ACTION



A low-cost sprayer, made of heavy tin for general purposes; holds one quart.

Misty	$ .40
Acme, ¾ pt.	.20
No. 222 Vapor	.25
Handy, 1 qt.	.30

GLASS JAR SPRAYER

Holds one quart; has long, powerful pump; two discharge tubes, which send the spray over a wide area. Price, 75c. G 2½—3½ oz., 15c.

BLIZZARD SPRAYER

Solid copper tank, seamless brass pump, continuous type, 1 qt. capacity. Price, $2.00.

This continuous atomizer will spray insecticides in a continuous fog of great volume. Unequaled for small garden and house plant sprays.

No. 26BG—Brass Pump, glass container	$1.25
ACE SENIOR, 1 Quart	.70

No. 335—Heavy brass pump and copper tank. $1.75.

CONTINUOUS

No. 429B—Copper, 36 oz	$1.60
No. 432—1 Quart Capacity	.75
No. 315—1 Quart Tin	.75
No. 435—3 Quart Capacity	1.25

COG-GEAR BARREL SPRAY PUMP

The construction is such that the entire pump sets inside the barrel containing the liquid, being bolted fast at its upper end to the head of the barrel.

Has bronze ball valves and brass seats. The air chamber is 32 inches in length, enabling the pump to throw a uniform, constant and elastic spray.

It has good leverage, is very powerful and easily operated. Complete with 15 feet of ½-inch, 5-ply hose, Vermorel or Bordeaux nozzle and agitators. Price, No. R305B, $16.00. No. R318B (illustrated), $17.00. No. R308B, $27.00.

PERFECTION

This is the most powerful machine in its class. The barrel is 7½ inches in diameter and 20 inches high. The pump is 1¾ seamless brass tubing. The valves are metal and work automatically from 8 to 15 minutes, and may be recharged in 12 seconds. No. 210G, Galvanized Steel, $6.50. No. 210B, Copper, $10.50.

HUDSON JUNIOR SPRAYER

Capacity about 2½ gallons. Shipping weight 8 pounds. No. 240G, Junior with galvanized tank, $4.75, No. 240B, Junior with brass tank, $7.25.

HUDSON LEADER SPRAYER

A real value in the compressed air sprayer field. Well constructed throughout. 3½-gal. capacity galvanized tank fitted with funnel top. No. 192G, $3.75.

HUDSON THRIFTY SPRAYER

Capacity about 2½ gallons. No. 120G, Galvanized, $2.85.

HUDSON CLIMAX

3½-gallon capacity. No. 235G, Galvanized, $4.75. No. 235B, Copper, $8.00

R324

PERFECT LEVER BUCKET SPRAY PUMP

The air chamber is 50 per cent larger than the Little Giant Sprayer. Price, complete with agitator, hose and nozzle, $6.50. 8-foot extension pipe, 80c.

BROWN'S OPEN-HED

Electrically welded seams and galvanized after fabrication. Double acting pump lock, tank opening 5 in. in diameter, can easily be wiped dry to lengthen life of sprayer, tank guaranteed for 100 lb. pressure, rubber double grip pump handle.

No. 4B—Brass, 4 gal. swivel nozzle	$11.75
No. 4D—Galv. 4 gal. swivel nozzle	$7.25
No. 3B—Brass, 3 gal. plain nozzle	$9.45
No. 3D—Galv., 3 gal. plain nozzle	$6.35

BROWN'S No. 400 SPRAYER

A sprayer designed to give maximum service, electrically welded seams, funnel shaped filler opening for easy filling, 2-inch diameter solid brass pump cylinder, 4-gallon capacity.

Galvanized, $5.25; Brass, $8.25.

BROWN'S FUNNEL TOP SYRAYER

Capacity 3½ gallons. No. 350D, Galvanized, $4.25.

AUTO SPRAY No. 50

Capacity 2½ gallons. Brass, $7.00; Galvanized, $4.50.

"CCC" BUCKET SPRAYER

Price $6.85

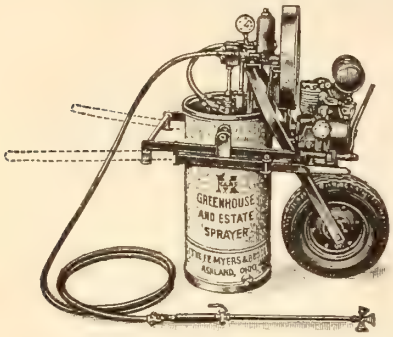
HUDSON BOOSTER SPRAYER—191-G

An inexpensive compressed air sprayer, well constructed. 3¼ gal. capacity. Galvanized, $3.00.

HUDSON DU-MORE SPRAYER

A continuous high pressure sprayer adapted for all truck and field crops Capacity 4 gallons. No. 247G, galvanized tank, $14.50.

MYERS GREENHOUSE AND ESTATE SPRAYER



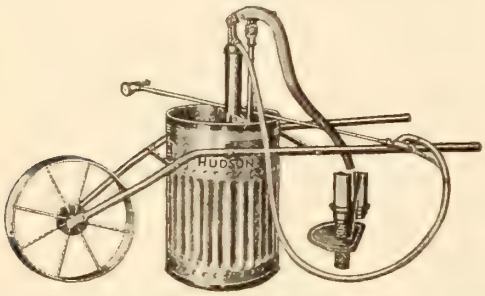
Motor or engine powered, rubber tire or steel wheel, folding handles, 12½ gal. galv. tank, 225 lb. pressure porcelain lined pump.

No. 806MGHS—Motor driven ¼ H. P.—110 volt 60 cycle with 50 feet of cord, steel wheel **$78.00.**

No. 806MGHR—Motor driven ¼ H. P.—110 volt 60 cycle with 50 feet of cord, rubber tired **$88.00.**

No. 806EGHS—Engine driven ½ H. P. steel wheel **$100.00.**
No. 806EGHR—Engine driven ½ H. P. rubber tired. (Illustrated) **$110.00.**

IDEAL PORTABLE SPRAYER



An ideal wheelbarrow type sprayer with 18-gallon galvanized tank and operated with a large removable barrel pump. The frame is made of heavy steel tubing reinforced with channel iron cross braces. Discharge equipment consists of 6-foot spray hose, 4-foot extension pipe, an Ideal angle nozzle, and leakless shut-off. **No. 34S** (Illustrated), **$20.00.** Above outfit with air pressure tank and 200-pound pressure gauge, **No. 35S, $30.00.**

MYERS TRACTION SPRAYER

No. 1078—An economical one horse, two-row traction sprayer for row crop, well balanced, for easy handling. 25 gal. galvanized tank, maximum pressure 150 lbs; rotary agitator, adjustable boom, nozzles, lever shut-off and relief valve. **$70.00.**

ARNOLD GARDEN HOSE INSECTICIDE SPRAYER

Complete Sprayer consists of non-leak shut-off, transparent cartridge chamber with metal threaded ends, and 12-inch angle spraying nozzle. All metal parts chromium plated.
Price, $3.50

Accessories

36-inch Angle Extension Nozzle, chromium finish....**$1.50**

36-inch Straight Extension, chromium finish **$1.50**

Sub-Surface Feeder and Irrigator, Dulux finish **$1.25**

Extra Transparent Cartridge Chamber with metal threaded ends, chromium plated, and chromium plated Coupling to form double chamber for dual spraying.....**$1.25**

Cartridges

Arsenate of Lead, Bordeaux Mixture, Dormo-Spray Plant Food, Sulphur—**25c each.** Japanese Beetle Spray, Nicotine, Pyrethrum, Rotenone, Tri-O-Spray—**30c each.**

ROOT DUSTERS

CHALLENGER TWO ROW TRACTION (Illustrated). Easy to operate and does twice the amount of work in half the time and with better results than hand models. Feed adjustment per acre 1 to 20 lbs. Hopper capacity 7½ lbs.
No. T3, $30.00.
No. T3R, as above, but with rubber tire, **$31.50.**

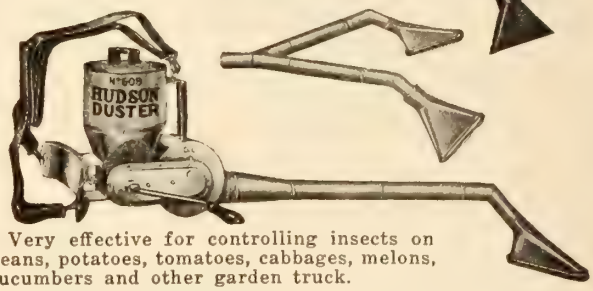
JUMBO—Plunger type, dusts both top and underside of plant foliage. 2½ in. dia., 32½ in. long. **$2.40.**

C-1—A sturdy and economical crank type duster, built of heavy steel, gears enclosed in dust proof steel housing, well balanced for easy operation. Hopper capacity 3 lbs. **$11.50.**

C-3 — (Illustrated). Hopper capacity 7½ lbs. Feed adjustment per acre 1 to 20 lbs. **$17.75.**

C-3

HUDSON DUSTERS



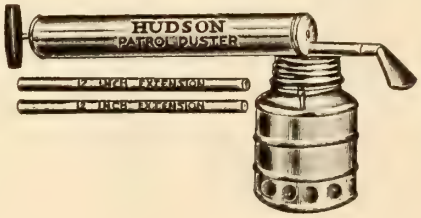
Very effective for controlling insects on beans, potatoes, tomatoes, cabbages, melons, cucumbers and other garden truck.

All parts are pressed from lead coated sheet steel, attractively painted and finished. Gears are steel, machine cut, housed in a dust proof case filled with oil. All bearings are self lubricating. Discharge equipment consists of two nozzles, two elbows, a Wye connection, and four 15-inch tubes. Can be used with one or two nozzles, arranged for dusting from above or under surface of low lying plants, shrubs, etc.

No. 608—Develops unusually powerful air blast and has two agitators, one rotary and one oscillating. Capacity 5 to 10 pounds, depending upon the material used. **$12.50.**

CRYSTAL DUSTER
$1.35

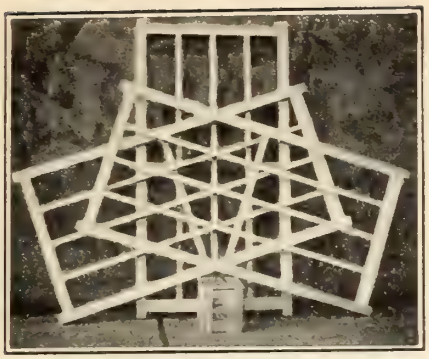
HUDSON DUSTERS



Patrol, as illustrated, **90c.**

Cadet, Powder Reservoir, 3x4 inch, **each, 35c.**

Major, Powder Reservoir, 4x4½ inch, **each, 75c.**



HOT BED SASH

Finest quality; white pine lumber, free from knots, substantially made, grooved for glass to lap or for putty (unglazed). Size, 3 feet 2 inches by 6 feet. $1.75 each; 10, $16.50.

HOT BED GLASS

1 box of glass will glaze 3 sash, 8x10 and 10x12, $3.00 per box.

MICO WATERPROOF HOT BED MATS

Made from heavy weight burlap, absorbent pulp and felt cemented together with a specially prepared waterproof compound. This combination forms a covering both airtight and waterproof. Easy to handle. Wear for years. Milo mats are made in sizes 40x78 inches and 78x80 inches, also in continuous lengths. 40x78 inch, $1.65 each; 78x80 inch, $3.25 each.

MARLINE

Made from Indian Hemp and the best product in making Straw Mats. Furnished in 1 and 5-pound balls. Per pound, 40c.

PEERLESS GLAZING POINTS

Price, per box of 1,000, 75c. Pincers, per pair, 70c.

MASTICA

For glazing greenhouses, sashes, etc., new and old. It is elastic, adhesive and easily applied. It is not affected by dampness, heat or cold. Price, 1 gal., $2.50.

MASTICA GLAZING MACHINE

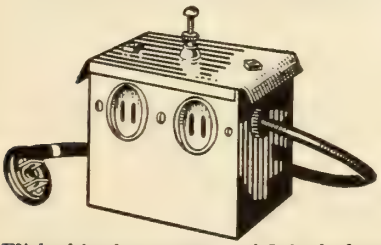
Price, $3.75

TWEMLOW'S OLD ENGLISH GLAZING PUTTY

Semi-Liquid

For bedding glass in sash and filling cracks or seams in roof joints or frames of greenhouses or hotbeds.
16-pound can (1 gallon capacity), $2.35

ELECTRIC HOT BED HEATER



With this thermostat and 2-60 ft. heating cable, four sash, or a total surface 6 ft. by 12 ft., can be economically heated. B-47 Thermostat only. Weight 4 lbs., $5.00 each. B-48 60 feet heater wire. Weight 7 lbs., $5.50 each.

GALVANIZED WATERING POTS "WIDE SPOUTS"

Made of heavy galvanized iron, with removable Sprinkler.

4 qt.	6 qt.	8 qt.	10 qt.	12 qt.	16 qt.
$ .65	$ .75	$ .85	$ .95	$1.10	$1.30

WOTHERSPOON LONG SPOUT WATERING POTS

4 qt.	6 qt.	8 qt.	10 qt.
$4.75	$5.25	$5.50	$5.95

PUTTY BULBS

A very useful tool for applying liquid Putty and Mastica for glazing Sash or Greenhouses. **Large size, $1.15.**

HOSE NOZZLES

Justrite Spray Nozzle ..... .50

WOODEN LABELS

	Painted	Plain
4 inch pot, per 1,000	$1.85	$1.50
4½ inch pot, per 1,000	...	1.60
5 inch pot, per 1,000	2.20	1.70
6 inch pot, per 1,000	2.55	....
3½ inch Tree, copper wired	2.40	1.95
8 inch Garden, per 1,000	4.85	...
10 inch Garden, per 1,000	6.00	...
12 inch Garden, per 1,000	8.50	...

Prices, per 100—3½ to 6 in., 35c; 8 in., 85c; 10 in., $1.10; 12 in., $1.25.

FLOWER POTS

We carry a complete line of Regular Pots, Azalea Pots, Bulb Pans and Saucers in stock and quote as follows:

Size	Each	Dozen	100	1,000	Saucer Each
2 in.	$ .02	$ .20	$1.15	$9.20	....
2½ in.	.03	.25	1.60	12.00	....
3 in.	.03	.30	1.90	15.50	...
4 in.	.05	.45	2.90	24.00	$ .04
5 in.	.08	.75	5.15	....	.05
6 in.	.10	1.00	7.45	....	.06
7 in.	.16	1.60	....	....	.08
8 in.	.25	2.50	....	....	.11
9 in.	.35	3.50	....	....	.15
10 in.	.50	5.00	....	....	.20
11 in.	.75	7.50	....	....	.30
12 in.	.90	9.00	....	....	.35

NEPONSET FLOWER POTS

Dia.	Red Shipping per 100	Red Shipping per 1000	Green Growing per 100	Green Growing per 1000
2¼ in.	$ .40	$3.25	$ .70	$5.75
2½ in.	.45	3.40	.75	6.00
3 in.	.50	4.00	.85	7.00
3½ in.	.60	5.00	1.10	9.30
4 in.	.75	6.30	1.30	10.95
5 in.	1.05	8.55	1.85	15.45
6 in.	1.35	11.20	2.40	20.00

CEDAR PLANT TUBS

(Richmond Style)

Made of Selected Virginia White Cedar, bound with electric welded hoops, painted green.

No.	Inside Top Dia.	Inside Bot. Dia.	Inside Depth	Price
5	10	7½	9	$ .75
7	12	9	11	1.15
9	14	11	13	1.65
11	16	12½	15	2.10
13	18	14½	17	2.50

WATERPROOF PLANT BANDS

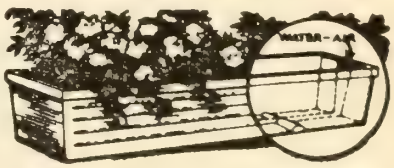
Ready-to-Use Plant Bands. They are ready to use and no time is lost in setting them up.

Size	Depth	Per 5,000	Per 1,000	Per 250
2x2 in.	2½ in.	$13.00	$2.75	$ .90
3x3 in.	3 in.	16.50	3.45	1.15

BAMBOO PLANT STAKES

3 ft. Light	$ .65 per 100	$5.00 per 1,000
5 ft. Heavy	.65 per doz.	4.75 per 100
6 ft. Heavy	.75 per doz.	5.25 per 100

BEACON FLOWER BOX



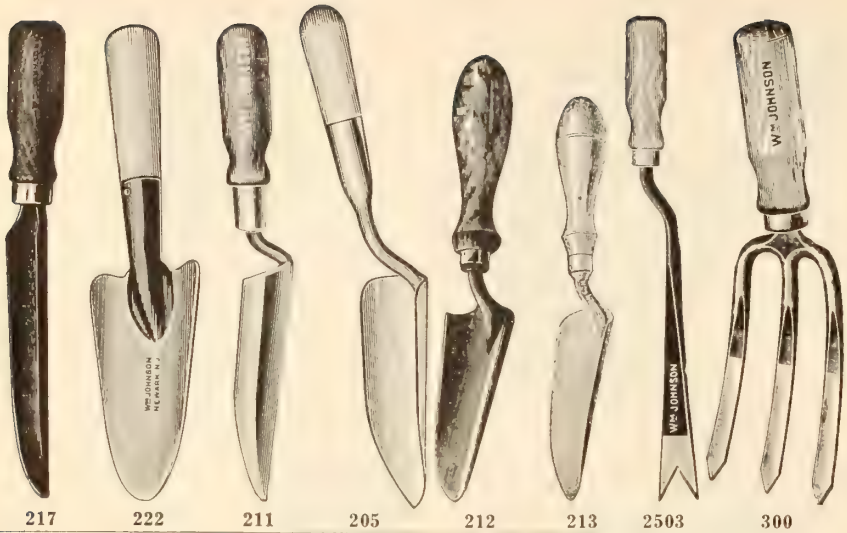
Galvanized with green enamel finish—efficient waterer and ventilator. 8½ inches wide and 6 inches deep.

24 in.	30 in.	36 in.	48 in.
$1.00	$1.20	$1.40	$1.70

GALVANIZED HARD STEEL WIRE PLANT STAKES

Very durable, neat and strong, and extensively used for carnation and rose beds. No. 8 gauge.

Height	Doz.	100	1,000
3 ft.	$ .35	$1.85	$15.50
3½ ft.	.40	2.10	18.25
4 ft.	.45	2.45	20.85
5 ft.	.50	2.85	26.00



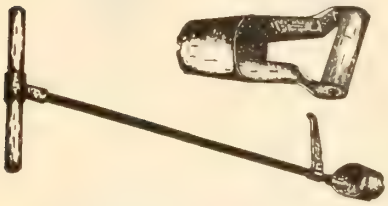
217 222 211 205 212 213 2503 300

DIBBLES

Decidedly the best tool for transferring plants.

Aluminum bent handle	$ .75
No. 2219V—4" steel point, wood handle	.60
218J—Wood bent handle, steel point	.60
Steel points only ea.	.35

HOLE-IN-ONE TOOLS



Makes a 3-inch hole in one operation, cuts into and removes soil leaving a perfectly flat bottomed hole. 5 inch D handle, 50c. 32 inch handle with adjustable foot rest and depth regulator, $4.00.

LOPPING SHEARS

No. 6, 20" Forged blade and ferrule	$1.50
No. 3 American Draw Cut (22-in. handles)	2.50

PORTER POINT CUT No. 1—20 and 24 inch steel handles, adjustable draw-cut. $4.50.

THERMOMETERS

	Price
5126—6 inch, Walnut	$1.00
5316—8½" Window; White Enameled	1.00
5440—6" Tin, painted green	.35
Mushroom Bed and Hot Bed, Brass Point	2.00

AMERICAN EDGING KNIVES

All Steel. Price, $1.00.

MAGIC WEEDER

A perfect and efficient tool, made of best tempered steel and furnished with 6 and 18-inch handle. Price, 15c and 20c.

GRAFTING WAX

Trowbridge Brand.

Price, ¼ lb., 20c; ½ lb., 30c; lb., 50c.

FRUIT PICKER

Made of galvanized hard-steel wire, shaped so as to imitate the human hand. Without pole. Price, 50c.

GRASS SHEARS

These tools are very handy because of the vertical movement of the handles.

Grass Shear (Standard)	$1.50
Grass Shear (Long Handle)	2.50
Pruner	1.25
Snip-Itt (illustrated)	1.00

V-4—Polished blade, enameled malleable handle. 45c each.

V-1—Hollow ground high polished blade, enameled finger grip malleable handle, offset 1½ inches, improved latch. 95c each.

PRUNING SAW

18-inch	$1.35
20-inch	1.50

GARDEN TROWELS

213J—6 in. Steel Blade	$ .10
212J—6 in. Extra Strong	.25
211J—6 in. Forged Steel	.60
T15V—6 in. Hollow Back	.35
T10V—6 in. Solid Shank	.75
205J—6 in. Forged Steel	.75
222J—5½ in. Strawberry	.15
217J—5 in. Transplanting	.10
217J—7 in. Transplanting	.20

ASPARAGUS KNIFE

2503J	.20
No. 223V	.40
ASPARAGUS BUNCHER	$3.85

HAND GARDEN FORKS

No. 300—3 Tine	$ .40
No. 40V—4 Tine	.30

TREE PRUNER

8 ft.	$1.80
10 ft.	2.00
12 ft.	2.20

TELEPHONE PRUNING HOOKS
Without pole, $2.20 each

HANGING BASKETS
Enameled green
8 in 20c

HINGED HANGING BRACKETS
For same 15c each

HEDGE SHEARS

Triumph Serrated		Style K101-T (with oil cup)	
VST08, 8 in.	$2.00	9 in.	$2.15
VST09 9 in.	2.25	10 in.	2.35

PLAIN—6 in., 90c; 8 in., $1.35
No. 80V—8 in. $1.00

THE RODERICK MOLE TRAP
(Illustrated) $1.25

OUT O'-SIGHT MOLE TRAP
$1.25

PRUNING SHEARS

	Each
No. V R 10 Tempered steel blades, green enamel handles, coil spring, 8 in.	$ .50
No. V 179 Tempered blades, polished; black handles; 9 in.	.85
No. V 139 Half polished, adjustable lock nut, renewable blade, 9 in.	1.40

NORCROSS CULTIVATOR

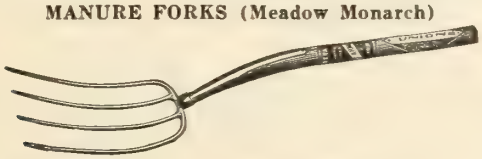
The Norcross is an adjustable garden cultivator of 5 blades. A very handy garden tool. By removing the center tooth you can straddle the rows. The teeth can be made to set close or wide apart. Can be detached from handle and attached to any wheel hoe.

Price, $1.20

MIDGET NORCROSS

3-prong, short handle.....$ .60
3-prong, long handle..... .90

MANURE FORKS (Meadow Monarch)



12½-inch tines, 4½ foot handle, strap ferrule. 4 tines, $1.25; 5 tines, $1.35; 6 tines, $1.55. Malleable D-Handles **same prices as above.**

HAY FORKS (Meadow Monarch)

Three 12-inch tines, 6-foot straight handle, Strap Ferrule. Price, $1.35.

SPADING FORKS

Farm King—Heavy, five 11-inch tines, D-Handle, Strap Ferrule. **Price, $2.00.**

Jumbo—Four 11-inch tines, D-Handle, Strap Ferrule. Price, $1.85.

Boys' Spading Forks—Four 8-inch tines, D-Handle, Plain Ferrule. **Price, 80c.**

ENSILAGE FORKS (Continental)

Ten 16-inch Oval tines, 2½-foot D-Handle, Strap Ferrule. Price, $2.95.

POTATO HOOKS (Continental)

Round Steel Tines, 4½-foot Handles.

Five 6½-inch tines ..... Price, $1.30
Six 6½-inch tines ..... Price, 1.45
Five 7-inch tines, heavy ..... Price, 1.50

GARDEN HOES

Meadow Monarch—Solid Socket Pattern (no rivets), 6 to 7½-inch Blades, 4-foot Handle. Price, $1.00.

Ladies' Hoe, Meadow Monarch—5-inch Blade, 4-foot Handle. Price, 80c.

WARREN HOES

Continental—Heart Shaped, large size 7½-inch. Price, $1.30.

WEEDING HOES

Acme—(Pressed Steel), Double Prong, 4½-inch Blade, 4½-foot handle. Price, 95c.

Forged Steel, Double Prong, 3⅝-inch Blade, 4½-foot handle, 8¼-inch head. Price, 95c.

FLORAL SETS

Consisting of Shovel, Hoe and Rake. **Price per set, $2.00.**

STEEL GARDEN RAKES

Meadow Monarch—Round Bow Curved Teeth, 5-foot Handle. Price, 14 teeth, $1.00; 16 teeth, $1.10.

Meadow Monarch—Level Head Curved Teeth, 5½-foot Handle. Price, 12 teeth, 80c; 14 teeth, 85c; 16 teeth, 95c.

BROOM RAKES

Continental—22 14-inch Flat Teeth, 4-foot Handle, Flexible Spring Steel. **Price, 90c.**

WIRE LAWN RAKES

Meadow Monarch—24 2-inch Teeth, 5-foot Handle, No. 9 Steel Wire. **Price, 85c.**

WOOD LAWN RAKE

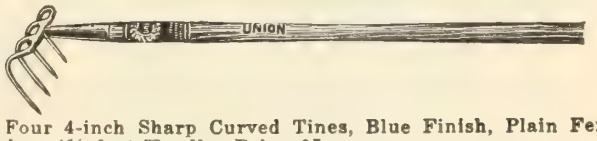
3 Wire Brace, **24 teeth, 70c; 1 Wire Brace, 20 teeth, 60c.**

WOOD HAY RAKE. 2 Wire, 10 teeth, 50c.

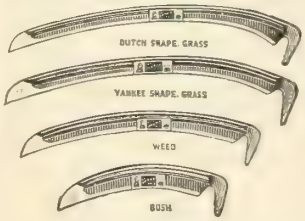
TURF EDGERS

Socket Pattern, 9-inch 1/3 Polished Blade, Green Finish, 4-foot Handle. **Price, $1.00.**

SPEEDY CULTIVATORS



Four 4-inch Sharp Curved Tines, Blue Finish, Plain Ferrules; 4⅓-foot Handle. **Price, 95c.**



SCYTHES	Price
Best American Grass	$1.60
Bush or Brier Scythes	1.60
English T. Waldron 32 in., $3.00; 34 in., $3.15; 36 in., $3.35.	
Little Giant Dutchman	1.45
SNATH or SCYTHE HANDLES	
Patented Fasteners	Price, $1.65
Bush Snath, heavy	Price, 1.65

GRASS AND BRUSH HOOKS

American Grass Hook, V B 3.....$ 55
American, No. K-1..... .35
American, No. V-4..... .45
German Grass Hook..... .65

BRUSH HOOKS

For shrubbery and underbrush.
Tempered Steel, No. 25 (with handle) **Price, $1.75**

LIGHTNING HAY KNIFE

Crucible Steel.....Price, $1.75

CHAMPION POTATO SCOOP

Heavy wire potato and vegetable scoop, D Handle.....$2.15

SHOVELS

Round Point Long Handle

Circle Brand .....$ .85
Gold Target..... 1.10
OK Champion..... 1.55

Round Point D Handle

OK Champion.....$1.45

Square Point Long Handle

Rabbit .....$ .55
OK Champion..... 1.60

Square Point D Handle

No. 4 OK Champion....$1.60
No. 6 Scoop..... 1.75

SPADES

O.K. Champion, solid back D Handle, $1.55

Nursery, extra heavy D-Handle, full strap. Price, $4.25.

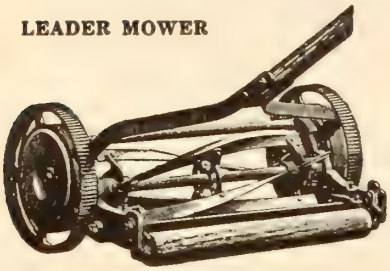
POST-HOLE DIGGERS

Price, $2.25

QUALITY LAWN MOWERS

All reliable, successful brands on which repairs are always easily obtained.

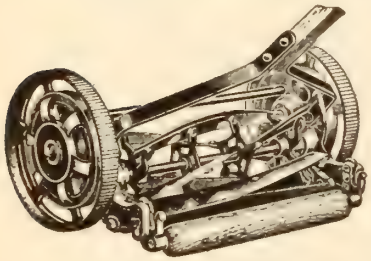
LEADER MOWER



Ball Bearing, 4 blades. Very light running. Wheels 9 inches high; reel 6 inches in diameter; all latest improvements; noiseless action; keen cutting; self-sharpening; high speed.

14 in.....$7.20
16 in..... 7.50
18 in..... 8.00

GREENWOOD BALL BEARING MOWER



The highest quality has been built into this mower, an outstanding value. Wheels 10 in. diameter, roller bearing, 5 extra heavy fine quality heat treated crucible steel blades, self-sharpening.

14 in.....$10.50
16 in..... 11.00

GOLDEN ARROW BALL BEARING MOWER

This unusual mower is a combination of Superior Features, including "Wear Forever" ball type driving ratchets. Wheels 10 in. diameter, roller bearing, nickle plated hub caps, 5 crucible steel blades, self-sharpening. **16 in., $14.00; 18 in., $15.00.**

KING HIGH GRASS MOWERS—BALL BEARING

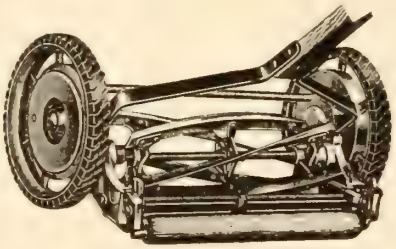
Driving wheels 10 in. high; 6 in. ball bearing revolving cutter; 5 crucible steel blades, hardened and tempered in oil. **14 in., $17.00; 16 in., $18.00; 18 in., $19.00.**

NOBRAKO

The unbreakable lawn mower made of malleable iron, commonly known as all-steel, 6 inch ball bearing, 5 blade revolving cutter; 10½ inch Hyatt roller bearing wheels. Silent in operation. **16 in., $16.00; 18 in., $17.00.**

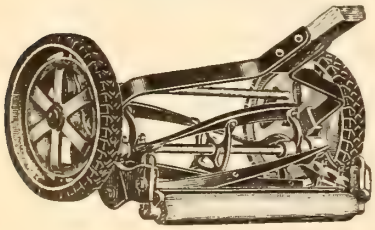
HIGH SPEED BALL BEARING MOWER

A special high grade mower; cuts the thickest grass fine and close. **Patented adjustment for center of stationary knife; drive wheels 11 in. in diameter, with solid rubber, non-skid tires; 5 blades; 6 in. ball bearing revolving cutter; knives crucible cast steel, hardened and tempered in oil; self-sharpening.**



14 in.....$12.50
16 in..... 13.00
18 in..... 13.50

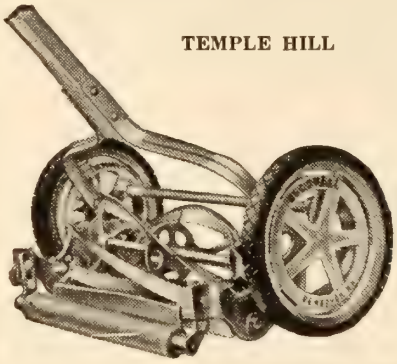
GLIDE BALL BEARING MOWER



Wheels 10 in. diameter, with solid rubber, non-skid tires; ball bearing; 5 heat treated crucible steel blades; 6 in. diameter revolving cutter.

14 in.....$9.20
16 in..... 9.50
18 in.....10.00

TEMPLE HILL



An inexpensive rubber tired lawn mower for the average lawn. Sturdy, durable, light in weight and easy to operate. Equipped with 10-in. diameter wheel and solid rubber tires, 5 blades, ball bearing.

14 in.....$10.30

CORNWALL

Similar to Temple Hill except that it has regular iron wheels and standard wood roller. Equipped with 10-in. diameter wheels, 5 blades, ball bearing. **14 in., $7.25; 18 in., $7.50.**

KENT

4 blades, ball bearing, 8-in. wheel. **12 in., $5.75.**

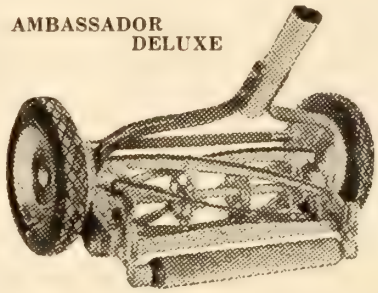
DIAMOND BALL BEARING MOWER

4 blade, 8-in. wheel. **12 in., $7.00.**

QUIET TURFMASTER BALL BEARING MOWER

Oversize semi-pneumatic rubber tires, rubber roller, chromium hub caps, smart streamline design. **16 in., $13.50; 18 in., $14.50.**

AMBASSADOR DELUXE



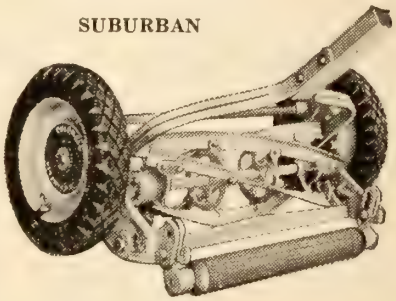
A popular priced machine for gardeners and estates. Equipped with roller bearings on the drive wheels, the revolving cutter and roller hanger. Pneumatic tired, 10-in. diameter wheels, 5 blades, ball bearing.

16 in.....$22.00

SUBURBAN

A popular priced, high grade mower. Equipped with 10-in. diameter wheels, pneumatic tires, 5 steel, heat-treated blades, ball bearing.

18 in.....$16.00



SPRINKLERS

Eureka Revolving Sprinkler, 12 in. high. Price, $1.75.

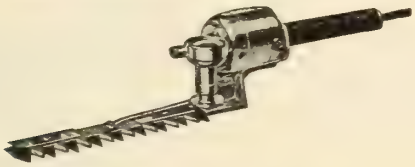
"Ring," all brass, 80c.

Here's a new and increasingly popular type of glove—for **men** and **women**—specially designed for garden wear. Just the thing you've been looking for.

All - Leather DIRT-PROOF
SOFT AS KID Easy to Wear

Sizes: Small, Medium, Large for Women; Medium and Large for Men, 75c. pr.; 2 prs. $1.40 postpaid.

DUMORE ELECTRIC HEDGE TRIMMER



Save time, labor and expense. Perfectly balanced, less vibration, less noise, reciprocal-radial action of blades assures clean cutting of tender twigs. Length overall, 18½ inches, cutting width 9 inches. Weight 3¾ lbs. **Price, $24.50.**

Rubber Covered Extension Cord, 30 ft., $2.00; 50 ft., $3.25; 100 ft., $6.00.

GRASWIPS

V-165—The new double edged long handled grass cutter. Use it like a golf club, cuts rapidly on both the forward and backward swing. **Each, 85c.**

GRASS COLLECTOR

Made of best quality duck with galvanized iron bottom, easily attached. Collectors, **No. 1 for 12-14-16 inch, $1.00; No. 2 for 18 inch, $1.25.**

LAWN ROLLERS

These rollers represent all the latest and up-to-date improvements; they are fitted with hardened steel roller bearings, which reduces the draft by 40 per cent; the counter-balance attached on the outside of the drum induces the handle to stand in an upright position. The outer edges of the drum are well rounded to prevent cutting.

No. 605 has plain bearings and no scraper.

WATER BALLAST LAWN ROLLER

No. 601—14x24, Empty	70 lbs.;	Filled 175 lbs.	$10.00
No. 602—18x24, Empty	85 lbs.;	Filled 265 lbs.	11.50
No. 603—24x24, Empty	110 lbs.;	Filled 420 lbs.	14.50
No. 605—14x24, Empty	68 lbs.;	Filled 175 lbs.	8.50

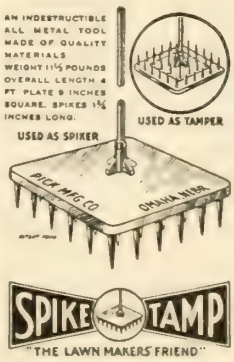
Cast Drum Rollers	Diameter Face	Total Length	Weight Pounds	Price
No. 504—2 section	20	20	250	$26.00
No. 507—2 section	20	24	300	32.00
No. 509—2 section	24	20	400	42.00

ECLIPSE UTILITY
21 in. Cut, $145.00, f. o. b. factory

GARDEN HOSE

Double braid molded, very durable, ⅝ inch. **11c ft., uncoupled; 25 ft. lengths with couplings, $2.85; 50 ft. lengths with couplings, $5.50.**

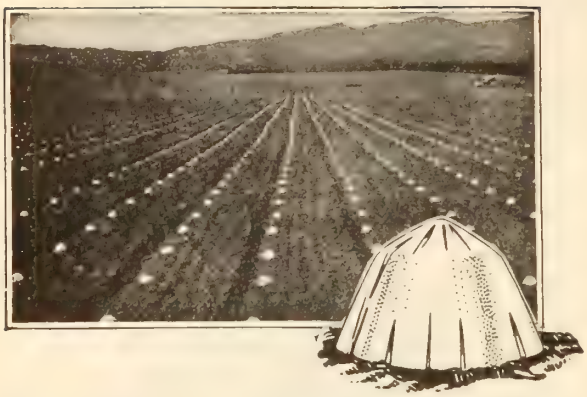
REMNANTS—10 to 24 ft. lengths, couplings attached. **7½c per ft.**



SPIKE-TAMP

A wonderful lawn tool for use when seeding or top dressing. For spiking hard areas. Saves money on seed, plant food and water. For use in pulverizing clods in the garden. Perpetually guaranteed against breakage. **$4.50.**

HOTKAPS



HOTKAPS can make many extra dollars for you this season by assuring you of earlier, bigger crops, and higher early-to-market prices. A patented wax paper cone which completely covers the plant and protects them from frost, rain, wind, ground-crusting and insects.

25 Hotkaps with Paper Setter.....$ .50
100 Hotkaps with Garden Set..... 2.75
250 Hotkaps with Garden Set..... 4.00
1000 Hotkaps.....$10.75 per 1000; 25,000, $10.00 per 1000
Steel Hotkap Setter and Tamper.....$1.50

MOUNTED GRINDSTONES

VICTOR. Tubular steel frame, adjustable steel seat, treadle type, ballbearing journals and crank attachment. Stone 19 to 22 inches in diameter by 1¾ to 2¼-in. face. $10.25.

WESTERN. Angular steel frame, adjustable steel seat and equipped with treadles, ballbearing, strong and rigid. Stone 19 to 20 inches in diameter by 1¾ to 2-inch face. $7.80.

KING. The frame is constructed of tubular steel, very rigid, ball bearing, adjustable seat, and equipped with treadles. Stone is 20-22 inches in diameter by 2-inch face..$10.95

CYCLE. Of angular steel, well braced, with sliding seat, ball-bearing bicycle treadles. Stone is 20-22 inches in diameter by 2-inch face of the best Berea grit.....$9.90

Loose Grindstones, 5c per pound. (40 to 200-lb. stones.)

WHEEL BARROWS

Substantially made of seasoned wood, firmly bolted and braced.

Buch's No. 1. Size of body 30 inches long, 24 inches wide in front and 25 inches in back. Side-boards 12 inches high. $8.65.

Buch's No. 2. Size of body 28 inches long and 20 to 24 inches wide. Side-boards 12 inches high. **$7.50.**

Buch's No. 3. 26 inches long, 19 to 22 inches wide. Side-boards 12 inches high. **$7.00.** With roller bearing rubber tired wheel, **$13.65.**

No. 4. Boys' Barrow, body 22 inches long, 15 by 18 inches wide, side-boards 9 inches high. **$6.00.**

No. 67. Greenhouse size. **$9.00.**

No. 6B. Steel wheel, wooden body. **$4.75.**

No. 6½. Wooden Frame, steel wheel. Bed length 27 inches, width 22-inch and 17-inch; 20-inch wheel. **$5.35.**

No. 8 Canal Barrow. With steel spoke wheel, full-sized bent tray, planed, cleated and strapped together, well finished. **$5.25.**

No. 8

No. 20. Steel Pan, 3 cubic feet capacity. **Wooden Handles.** $4.25.

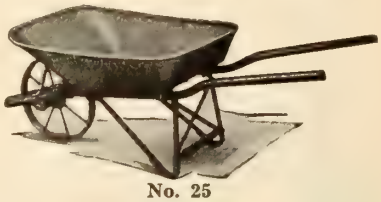
No. 20RTW. With rubber tired wheel. $7.35.

No. 17-B. Size of tray 32 by 27 inches; capacity 3½ cubic ft. $7.50.

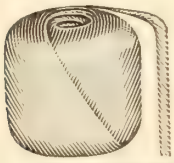
No. 17-B

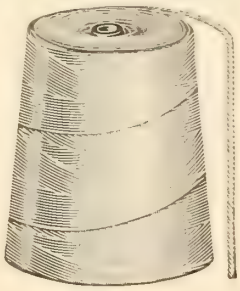
No. 25. All steel, tubular handles, riveted tray, high front to prevent spilling. Specially built for heavy work and rough usage. 3½ cubic ft. capacity. $8.35.

No. 165. 5 cubic feet capacity. $9.85.



No. 25





Asparagus Tape
Jute Cord
Cotton Cord
Hay Rope
Plow Lines
Binder Twine
Fodder Yarn

PRICES ON REQUEST
State Quantity Wanted.

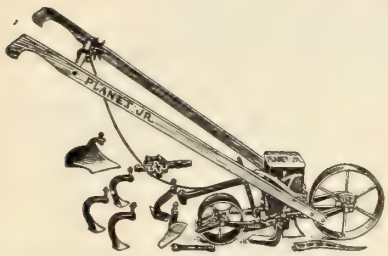
Save Hours of Labor with These Machines.

FELINS VEGETABLE TYING MACHINE

Bigger and Better Than Ever.

Standard, $65.00

No. 4



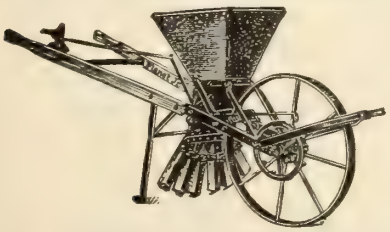
The No. 4 is a combination of the most useful tools for the home garden. Plants almost all vegetable seeds in continuous rows or in hills 4, 6, 8, 12 or 24 inches apart. A plow adjustable for depth opens a straight, narrow furrow, the seeds are dropped in it, are covered and the soil firmed and the next row marked out, all in the same operation. Can be converted into a Single Wheel Hoe by changing one bolt. Cultivating equipment includes the most useful attachments—hoes for weeding and shallow cultivation, cultivator teeth for deeper and general cultivation, and the plow for furrowing and ridging. Price, $18.75.

No. 4-D, a Seeder only. Price, $14.75.

No. 300A DRILL SEEDER

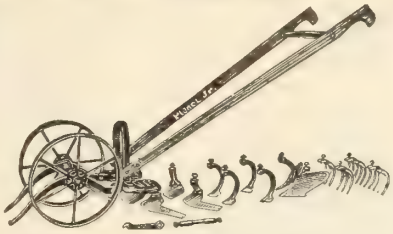
A plate or disc seeder for all seeds from the smallest up to and including peas, beans and corn. Growers of peas and beans will appreciate this seeder as it does not break the seed and sows with great regularity. Only three plates each with thirteen holes, making ample adjustment for various seed. Hopper holds four quarts and is removable which makes easy filling and emptying. Net weight 36 pounds. Price $20.00.

No. 220 FERTILIZER DISTRIBUTOR



Will distribute 100 to 2,000 pounds of commercial fertilizer to the acre. Six adjustable spouts spread from 4 to 30 inches. Equipment includes plates for closing up four spouts or three spouts on left side. Hopper weight placed over the wheel making lighter load and easier pushing. Feed can be opened and closed without stopping. Positive agitation. Price, $28.75.

No. 11 WHEEL HOE



Equipment is complete including one pair 6-inch and one pair 4½-inch hoes for weeding and shallow cultivation, four cultivator teeth for deeper and general cultivation, one pair of plows for plowing, covering and ridging, two 3-tooth and two 5-tooth rakes for fine close cultivation and a pair of leaf lifters which lifts the leaves or vines out of the way when the plants are more fully grown. Frame is adjustable for rows of different width. Price, $14.50.

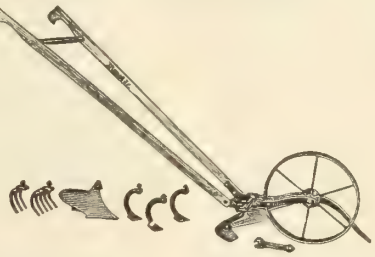
No. 12 WHEEL HOE

Same as No. 11, but less the rakes and 4½-inch hoes. Price, $11.50.

No. 13 WHEEL HOE

Same as No. 12, but with 6-inch hoes only. Price, $8.75.

No. 16 WHEEL HOE



Equipment very complete, including one pair of 6-inch hoes for weeding and shallow cultivation, three cultivator teeth for general and deeper cultivation, one plow with landside for hilling, ridging and plowing. One three-tooth and one five-tooth rake for fine close cultivation and one leaf lifter, which is useful for protecting overhanging leaves and vines. An ideal machine for the family garden. Price, $8.75.

No. 17 WHEEL HOE

Is of the same construction as No. 16, omitting the two rakes. Price, $7.75.

No. 17½ SINGLE WHEEL HOE

Equipment, one pair of 6-inch hoes, three steel cultivator teeth, one leaf lifter. Price, $6.75.

No. 18 WHEEL HOE

Frame and wheel as No. 16, but has for equipment one pair hoes only. Price, $5.75.

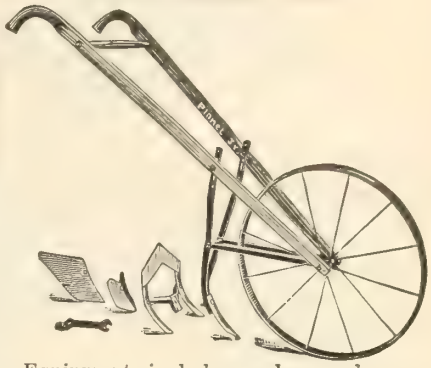
No. 19 GARDEN PLOW

An inexpensive, yet sturdy, garden plow and cultivator for the home garden. Attachments consist of plow, cultivator tooth, sweep and a five-prong cultivating attachment for fine work. Handles are adjustable for height. Price, $4.95.

No. 90-D 12-TOOTH HARROW

The fruit, berry and vegetable grower's favorite. Does fine, thorough cultivation. Expands to 32 inches; contracts to 12 inches. Price, $10.75.

No. 119 GARDEN PLOW



Equipment includes a large plow, a scuffle blade and three cultivator teeth. Due to the high center of gravity this tool pushes very easily. Price, $3.85.

No. 119W. Same as No. 119 with 5-prong cultivator attachment instead of scuffle blade. Price, $4.20.

No. 8 HORSE HOE

Made almost entirely of steel, well braced and adaptable to any conditions. Frame of stiff steel, extra long and high, closes to 10 inches and opens to 25. Cultivator teeth are of high carbon beveled steel, thereby making them self-sharpening and the point retains its shape, greatly prolonging the life of the steel. Patent hillers are reversible for hoeing or hilling. Can be run close to the plants without endangering the roots. Handles adjustable up, down and sidewise. Price, $15.50.

No. 9-D HORSE HOE and CULTIVATOR

Same as the No. 8, less the depth regulator and steel lever wheel. Strong and light. Does perfect work. Price, $12.25.

No. 9-D PLAIN 5-TOOTH CULTIVATOR

Equipment: Four 3x8-inch cultivator steels; one 4x8-inch cultivator steel; lever expander. Hollow steel standards and steel draft hook. Simple, practical —always ready for work. Price, $10.50.

No. 4-D PLAIN CULTIVATOR

Same as the No. 9-D, but does not include lever expander. Patent beveled steel teeth. An every-day, all-day tool. Price, $8.50.

No. 101-D PLAIN CULTIVATOR

Equipment: Five 3x8-inch cultivator steels; lever expander. Lever is all steel; simplified and improved; works very easily. Just the tool for sandy soils or light cultivating. Price, $8.75.

No. 100-D PLAIN CULTIVATOR

Same as the No. 101-D, less the lever expander. The right tool for sandy soils in this section. Price, $7.25.

No. 92-D PLAIN 12-TOOTH HARROW No Wheel

A light, but effective cultivator for fine work -at a moderate price. Price, $9.50.

VULCAN No. 43 TRACTOR PLOW

Especially adapted for light tractors. Includes No. B-72 Steel Bottoms, combination rolling coulters and jointers, quick detachable shares and adjustable frame for cutting 10, 12 or 14 inch furrows with same plow.

2 bottom 10, 12 or 14 in. steel $103.75

Rear rolling wheel or landside with short landside for above $8.00

VULCAN STEEL BEAM CHILLED PLOWS

Vulcan plows are perfectly balanced and are designed to run steadily with the least amount of labor to the operator and team.

No.	Capacity Inches	Plows	Mould-boards	Land-sides	Solid Shares	Slip Shares
8N-(A)	5x8	$13.40	$1.70	$ .65	$ .35	$ .60
10N	6x10	16.25	2.65	.90	.50	.90
13N-(20)	8x13	21.50	3.60	1.15	.67	1.10
16N-(40)	8x16	26.50	5.00	1.25	1.45	....

VULCAN STEEL BEAM DOUBLE SHOVEL PLOW

One of the handiest tools on the farm, not only for light plowing but for rapid cultivation as well. With heel slides. $7.25.

SHOVEL PLOWS

Steel beam, single shovel. **Price, $5.75.**
Steel beam, triple shovel. **Price, $8.80.**

BACK BANDS

Plain G-56 ..... $ .35
Padded E-56 ..... .45
351-L ..... .55
DeLux 1.00

TRACE CHAINS

Lucky Mule, electric welded.

7-10-2 ..... $ .90 pr.
7½-10-2 ..... 1.00 pr.

TIE OUT CHAINS

20 ft. ..... $ .60 each **30 ft.** ..... $ .80 each

BREAST CHAINS

26 in. ..... $ .70 pair

COW TIES

4½ ft. Electric Welded ..... $ .40 each

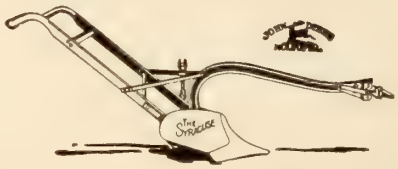
HALTER CHAINS

4½ ft. ..... $ .25 each

OLIVER PLOWS AND REPAIRS

	Stl.Beam Plows	Wd.Beam Plows	Mould-boards	Land-sides	Solid Shares	Slip Shares
AC-2	$ 9.45	....	$1.50	$ .60	$ .30	$ .40
BC	11.95	$11.70	1.90	.75	.40	.50
10	13.40	13.30	2.15	.80	.45	.60
13	14.80	14.75	2.90	1.00	.55	.70
19	15.80	15.70	3.50	1.10	.60	.75
20	17.25	17.25	3.75	1.15	.65	.80
E	....	21.65	4.15	1.25	.75	.90
40	19.75	19.75	4.15	1.25	.75	.90

SYRACUSE CHILLED PLOWS



Prices quoted are subject to 5% cash discount. Wheel and jointer extra.

One-Horse Plows

No. 50. Right, wood beam, light, one horse, making furrow 2 to 5 inches deep and 8 to 10 inches wide. $9.25.

No. 52. Right, wood beam, medium, one horse, making furrow 3 to 5½ inches deep and 9 to 11 inches wide. $14.00.

No. 53. Right wood beam, heavy, one horse or light two horse, making furrow 3 to 6 inches deep and 9 to 12 inches wide. $15.75.

No. 1464. Right, steel beam, $15.75.

No. 1465. Right, steel beam, $14.00.

Two-Horse Plows—Wood Beam

No. 603. Right, wood beam, light two horse, making furrow 4½ to 6½ inches deep and 10 to 12 inches wide. $17.00

No. 602 Right, and No. 502 Left. Wood beam, medium, two horse, making furrow 5 to 7 inches deep and 11 to 14 inches wide. $18.50.

No. 601 Right, and No. 501 Left. Wood beam, heavy, two horse or light three horse, making furrow 5½ to 8 inches deep and 12 to 16 inches wide. $20.75.

Two-Horse Plows—Steel Beam

No. 1462 Right and No. 1362 Left. Steel beam, similar to No. 602 wood beam plow. $18.50.

No. 1461 Right and No. 1361 Left. Steel beam, making furrow 5 to 8 inches deep and 12 to 16 inches wide. $20.75.

SYRACUSE REPAIRS

	Mould-boards	Land-sides	Solid Shares	Slip Shares
50	$2.00	$0.65	$0.40	$ ...
53	2.90	.85	.56	.68
603	3.10	1.05	.50	.62
602	3.85	1.00	.55	.67
601	3.85	1.09	.64	.76
1462	3.60	1.00	.55	.67
1461	3.60	1.09	.64	.76

SINGLE AND DOUBLE TREES

Single, 2 hooks, 26 inch 55c; 28 inch 60c.
Single, 3 hooks, 26 inch 60c; 28 inch 65c.
Double, 36 inch $1.00; 40 inch $1.25.
Neck Yoke, 40 inch $1.25.

STEEL LAND ROLLERS

Drums of Heavy Tank Steel. Angle Steel Tops—Angles 3x3x5/16 inches—Extra Strong. Axles—1⅝-inch Round Steel. Closed Pressed Steel Heads. Hardwood Boxings—Acknowledged by all to be the best. Tractor or Horse Hitch.

No. 102½—8 ft., 2 sec., 26 in. diameter; 550 lbs..... $45.75
No. 103½—8 ft., 3 sec., 26 in. diameter; 600 lbs..... 48.25
No. 105½—8 ft., 2 sec., 24 in. diameter; 510 lbs..... 43.25
No. 106½—8 ft., 3 sec., 24 in. diameter; 535 lbs..... 45.75
No. 120½—9 ft., 3 sec., 24 in. diameter; 585 lbs..... 48.75
No. 118½—4⅔ ft., 2 sec., 24 in. diameter; 370 lbs..... 40.75

Extra for Eveners, $2.35.

VULCAN TRACTOR PULVERIZER

DOUBLE GANG WITH TRACTOR HITCH

15 inch Front Wheels 12 inch Rear Wheels

No.	Length	Pulverizes	Weight	Price
DT-76....	7 ft.	76 in.	940 lbs.	$65.85
DT-96....	8 ft.	86 in.	1063 lbs.	74.00
DT-88....	9 ft.	98 in.	1180 lbs.	84.50
DT-108...	10 ft. 4 in.	114 in.	1375 lbs.	95.75
DT-120...	11 ft.	122 in.	1463 lbs.	101.25

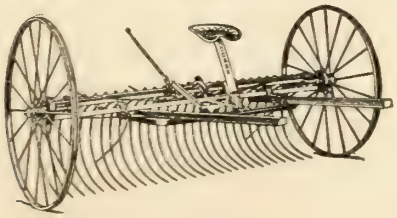
SINGLE GANG WITH TRACTOR HITCH

15 inch Wheels

No.	Length	Pulverizes	Weight	Price
ST-76....	7 ft.	70 in.	531 lbs.	$42.00
ST-88 ...	8 ft.	82 in.	643 lbs.	44.75
ST-96 ...	9 ft.	90 in.	680 lbs.	47.50
ST-108 ..	10 ft.	96 in.	767 lbs.	54.95
ST-120...	11 ft.	112 in.	838 lbs.	59.85

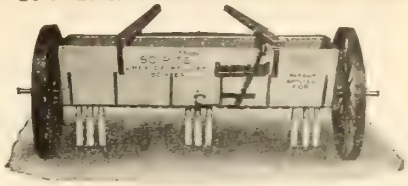
Long Tongue and Seat, additional..... $2.85
Seat and Spring Only, additional..... 1.95
Foretruck Complete, additional..... 11.45
Long Tongue instead of Tractor Hitch, no charge.

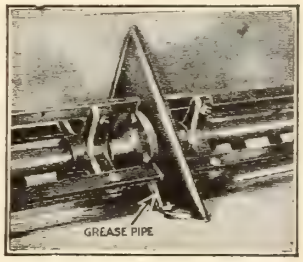
J. I. CASE DUMP RAKES



No. 923, 9 ft., 23 teeth (469 lbs.)..... $52.25
No. 1232, 12 ft., 32 teeth..... 60.60

"SO-RITE" UNIVERSAL FERTILIZER AND LIME SOWERS





Interior View of Hopper

Bottom View of Outlet

No Belts to Replace

As a Fertilizer Drill—Rubber spouts are attachable to any desired points three inches apart under the entire machine; adjustable, of course, to any width rows. Used as a 2-row, 3-row, or 4-row machine remove by hand—no tools necessary—stoppers and insert spouts where desired, closing the outlets from where the spouts came with the stoppers, which were taken out. The quantity to be sowed is obtained by adjustment of lever on back of machine, which lever opens and closes the outlets.

As a Broadcaster—Remove all stoppers, spouts and the broadcast of this So-Rite machine is perfect.

Note—Grease cup in rear feeds grease to center bearings. Stoppers and spouts are held in place by copper clips which will not rust. Feed is regular and positive. All parts strongly and simply made. Wheels are adjustable.

Specifications:
Wheels—36 in. high.
Tires—3 in. wide.
Axle—1¼ in. C. R. Steel.
Hopper—⅞ in. Yellow Pine.
Bearings, Outer—Solid Oak (oil-soaked).
Bearings, Center—Cast Iron (with grease cup).
Capacity Hopper—400 to 700 lbs.
Capacity Acre—300 to 5,000 lbs.

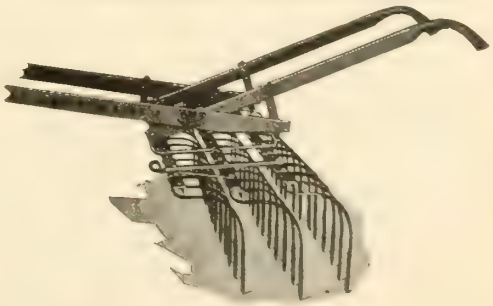
Width	No. Spouts	Weight	Price
3 ft. 1-Horse.....	6	225 lbs.	$38.00
6 ft. 1-Horse.....	9	325 lbs.	54.80
7 ft. 1-Horse.....	9	350 lbs.	59.60
8 ft. 1-Horse.....	9	375 lbs.	64.40
9 ft. 2-Horse.....	9	400 lbs.	69.20
10 ft. 2-Horse.....	9	425 lbs.	74.00

Extra Spouts Complete 75c each.

DRAG SCOOPS

No. 1, 100 lbs., $9.30
No. 2, 90 lbs., $8.85
No. 3, 80 lbs., $8.40

RODERICK LEAN WALKING WEEDER



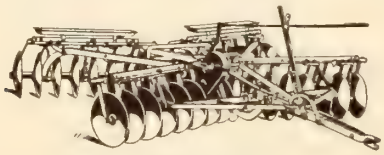
7½ ft., 39 teeth..... $12.45
Runners additional if desired..... 1.25

RODERICK LEAN "SPEEDISK" AUTOMATIC TRACTOR DISC HARROW

Equipped with scrapers, round disc blades, front and rear weight frames, special rear gang angling lever, gang bolt 1⅛ inch, all discs spaced 7⅛ inches.

Discs	Diameter	Width	Weight	Price
20	16 in.	6 ft.	860 lbs.	$129.00
24	16 in.	7 ft.	965 lbs.	144.75
28	16 in.	8¼ ft.	1035 lbs.	155.25
28	18 in.	8¼ ft.	1105 lbs.	165.75

J. I. CASE POWER CONTROL DISK HARROWS



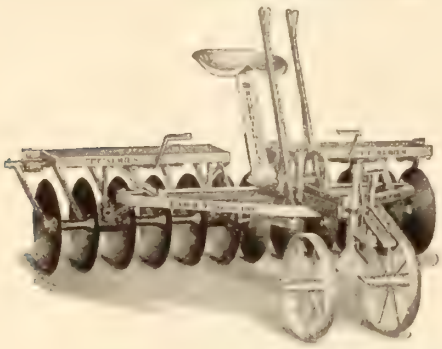
Double Cut

No. 76, 6 ft., 24 16-inch disks $131.00
No. 77, 7 ft., 28 16-inch disks 142.50
No. 78, 7 ft., 28 18-inch disks 152.50

Single Cut

No. 78S, 8 ft., 16 16-inch disks $82.00

RODERICK LEAN "FT" SERIES DISC HARROWS WITH DOUBLE WHEEL FORETRUCK



Electric heat treated round discs; flexible center foot pressure lever replaces unhandy third lever. Furnished with oscillating scrapers and with weight pans. No neckyoke, pole or pole irons.

No.	Discs	Diam.	Hitch	Width	Weight	Price
FT-416	8	16	2HH	4 ft.	378 lbs.	$56.25
FT-516	10	16	2HH	5 ft.	403 lbs.	60.75
FT-616	12	16	3HH	6 ft.	465 lbs.	66.25

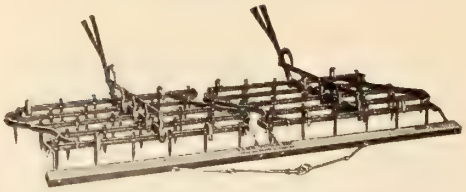
ROYAL GRASS AND CLOVER SEEDER

Easily sows 40 acres a day. Broadcast this sure way and save seed.

No. 11, 14 ft. single hopper, chain feed, hopper capacity ½ bu. **$17.00; No. 11,** 16 ft. **$18.00.**

No. 10, 10 ft. double hopper, chain feed, for all grass seeds, grain, cowpeas and soybeans, hopper capacity 1 bu. **$19.50.**

RODERICK LEAN SPIKE TOOTH HARROWS "VO" LEVER HARROW



Diamond teeth, 5-bar guarded end adjusted lever.

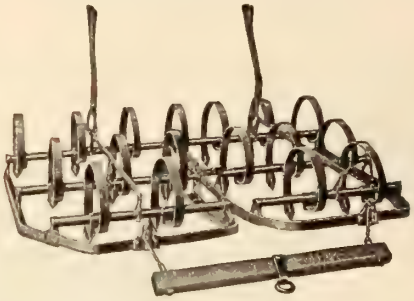
25 tooth section, no drawbar, 3½ ft. cut, weight 77 lbs. **$8.00.**

30 tooth section, no drawbar, 4½ ft. cut, weight 88 lbs. **$9.50.**

No. 14VO—50 teeth, two section, with drawbar, 7½ ft. cut, weight 190 lbs. **$21.50.**

No. 15VO—60 teeth, two section, with drawbar, 9 ft. cut, weight 219 lbs. **$24.25.**

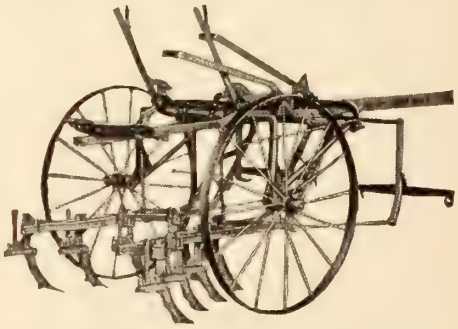
RODERICK LEAN SPRING TOOTH HARROWS ALL STEEL—"SPB" SERIES



PIPE BAR—Adjusting Lever—Low Frame—Adjustable Teeth—One Short Center Runner.

No.	Teeth	Section	Weight	Price
5SPB	15	2	241 lbs.	$25.45
7SPB	17	2	260 lbs.	27.15
23SPB	23	3	376 lbs.	38.00

RODERICK LEAN No. 7 PIVOT AXLE CULTIVATOR

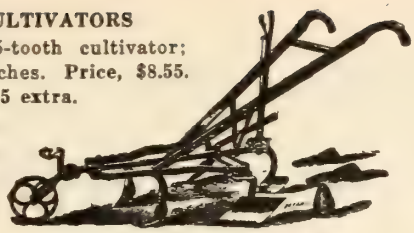


Staggered Spoke, 40 inch Wheel
Specify if Round or Open Boot Desired.

Shovels		Weight	Price
4	Pin Break, rd. post	444 lbs.	$60.00
4	Spring Break, rd. post	456 lbs.	63.75
6	Pin Break, rd. post	467 lbs.	62.50
6	Spring Break, rd. post	487 lbs.	68.25
8	Pin Break, rd. post	482 lbs.	64.25
8	Spring Break, rd. post	506 lbs.	71.50

No. 7 With 8 Spring Tooth Gangs, 446 lbs. **$64.00.**

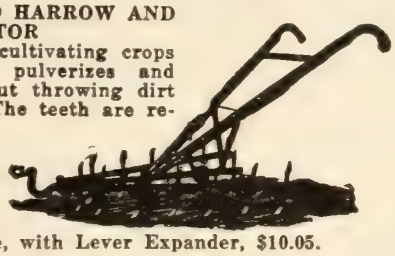
IRON AGE CULTIVATORS



No. 605. Plain 5-tooth cultivator; expands 9 to 24 inches. Price, $8.55. Lever Expander, $2.25 extra.

No. 800L. Cultivator and horse hoe combined, as illustrated. Price, $15.65.

IRON AGE COMBINED HARROW AND CULTIVATOR



A splendid tool for cultivating crops in rows; thoroughly pulverizes and loosens the soil without throwing dirt on the small plants. The teeth are reversible and can be changed in 4 different positions. Expands 11 inches to 36 inches. No. 4014. Price as shown in illustration, $8.90. Price, with Lever Expander, $10.05.

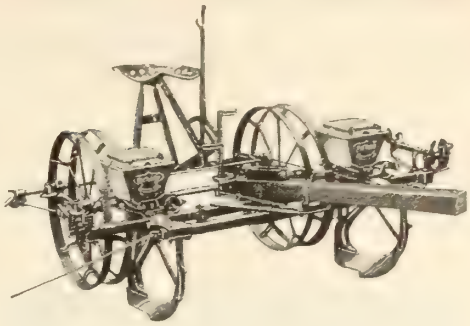
PEORIA FERTILIZER SINGLE-DISC SHOE DRILLS

Wood Hopper with Galvanized Steel Lids. One pole, two horse, 3 inch Steel Wheels.

Size	Weight	Price
9x7	1043 lbs.	$152.50
10x7	1180 lbs.	171.85

Seat with spring attachment, extra $2.25.
Grain agitators, extra $3.15.
9x7 Grass Seed Attachment with spouts, extra $13.35.
10x7 Grass Seed Attachment with spouts, extra $15.20.

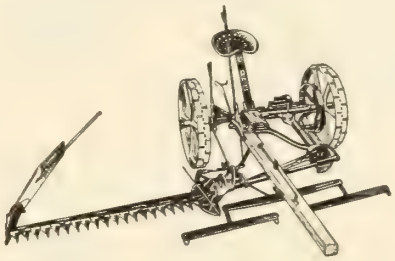
HAYES No. 26 2-WHEEL CORN PLANTER



For Horse Drawn Operation
Round or Stub Runners, Std. Adj.
30 in., less drill, weight 520 lbs. $80.50.
30 in., with drill, weight 537 lbs. $83.45.

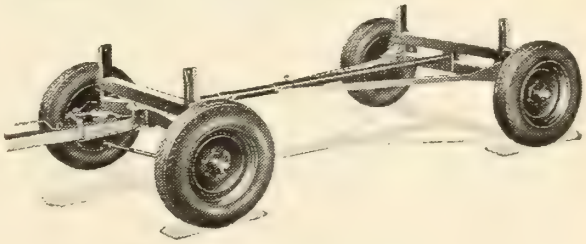
No. 26 FERTILIZER ATTACHMENT—Two wheel. Weight 100 lbs. $28.50.

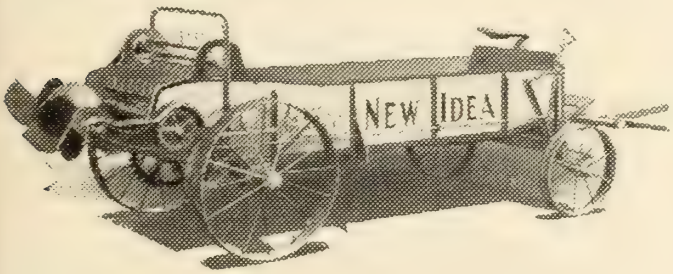
J. I. CASE MOWERS



No. 55, 5 ft. cut, plain lift, final drive gears running in oil $100.25

NEW IDEA ALL STEEL WAGONS, let us quote.





NEW IDEA MANURE SPREADER

Let the spreader earn you profits. A New Idea Spreader will enable you to get the full worth out of your manure. Four different and positive conveyor speeds which enables the operator to spread just as thin or as heavy as the soil requires. Capacity 60-65 bushels.

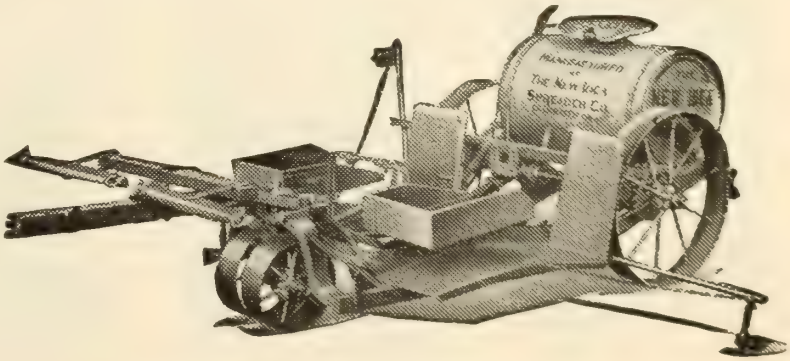
No. 9 with oil gun, two horse hitch and neckyoke. **$171.25.**
Lime Spreader Attachment for No. 9, **$30.00.**

NEW IDEA TRANSPLANTER

Saves money at planting time and brings extra profit at harvest time. Handles all transplantable crops and can be adapted to all methods of planting.

No. 5 with regular 5 inch furrow opener, 2 horse hitch, neckyoke and press wheels; weight 689 lbs. **$115.75.**

No. 5 same as above but with deep 8 inch furrow opener instead of regular; weight 695 lbs. **$120.75.**



BLOOD TESTED
FOR B. W. D.
BY
ANTIGEN METHOD

MANNS' Quality-Bred CHICKS

WE GUARANTEE DELIVERY

100% LIVE VIGOROUS CHICKS

With Profit Producing Characteristics Bred Into Them

MAIL ORDERS

It is very important that you let us have your order as early as possible. Just as soon as you have read this page is the very best time. You can in this way specify a definite delivery date and we can serve you direct from the hatchery with strong chicks full of vitality. Should there be a decline in the market price of chicks, we will make an adjustment to equal the reduction.

Customers not having charge accounts with us are requested to send at least one-fourth of the price when placing orders; remittance for balance to reach us before shipment is made. No chicks sent C.O.D. No orders accepted for less than 25 chicks of any one variety.

DELIVERIES

Chicks are forwarded postpaid and brief instructions are sent with each order, suggesting best methods of care and feeding. Be prepared; see that hovers are in good condition, and have a ready supply of grit, charcoal and Buttermilk Starting Feed.

Please Note—Inspect chicks immediately upon arrival. If full count live chicks are not received, have postman sign a statement showing number dead, mail this to us and a satisfactory adjustment will be made.

Manns' chicks are produced from hand selected, Blood-Tested, hens mated to large, true-to-type Blood-Tested, well bred cockerels. These breeders are continually culled for egg production and vigor to insure you of chicks that will not only live, but will grow uniformly, rapidly and profitably for meat or egg production. Upon maturity you will have strong and healthy pullets capable of making money.

Only standard size or larger eggs are set, and all chicks are graded before shipment.

All Leghorns are hatched from outstanding two to five year old hens.

These SUPERIOR Chicks are offered at moderate prices and are available every week in the year.

CROSS BREEDS

Our Barred Crosses have exceptional vitality, livability, growth and egg producing qualities. Cross-Breeding produces vigor.

SPECIAL MATINGS

12c each; $11.75 per 100; 300 at $11.50 per 100.

In White Leghorns, New Hampshires, R. I. Reds, Barred Rocks and White Rocks we offer chicks produced from special matings. Stock from nationally known breeders is used for the production of these famous chicks. Only extra large eggs are set. A real special mating that enables you to obtain these blood lines economically and without the risks of distant shipment. They are capable of outstanding growth and unusually good egg production. We know they are as fine as any Special Mating chicks offered even at much higher prices.

PRICES EFFECTIVE UNTIL APRIL 20th

Barred Rocks Rhode Island Reds White Leghorns (Large) White Rocks White Wyandottes	**$9.00 Per 100** 300 or more, less ½c each.
Barred Crosses New Hampshire Reds	**$9.50 Per 100**
Buff Orpingtons White Giants	**$11.00 Per 100**

Less than 100 lots add 1c each.
Order Early—You will be given full benefit of any reduction in prices until shipping date.

DUCKS

WHITE PEKIN DUCKS are the largest type, fastest growing obtainable. Hatched in special incubators they are 100% perfect. **20c each; $17.50 per 100.**

TURKEY POULTS

MAMMOTH BRONZE TURKEYS from well bred, Blood-Tested stock. All eggs purchased from farms specializing in Turkey breeding. Their livability and vigor will surprise you. (Let us quote.)

White Wyandotte

Barred Plymouth Rock

Rhode Island Red

White Leghorn

FOR ECONOMY
Give Your Chicks The Best
FEED THEM

Conkeys

(The Original)

Let Us Quote

CONKEYS YO STARTING FEED
CONKEYS YO TURKEY STARTING AND GROWING MASH
CONKEYS YO BROILER MASH
CONKEYS YO GROWING MASH
CONKEYS YO EGG MASH
CONKEYS RED SEAL GROWING MASH
CONKEYS CHICK GRAINS
CONKEYS GROWING GRAINS
CONKEYS SCRATCH
CONKEYS SUPERIOR SCRATCH
CONKEYS CRACKED CORN
CONKEYS WHOLE CORN
CONKEYS PIGEON FEED
CONKEYS RABBIT FEED
CONKEYS YO DOG FOOD

Conkeys Y-O

1 lb., 50c; 2 lbs., 90c; 5 lbs., $1.60; 25 lbs., $5.45; 50 lbs., $9.75; 100 lbs., $16.50.

CONKEYS POULTRY REMEDIES

Be Prepared

Keep A "Conkey "Corner" In Your Poultry House

CONKEYS OLD RELIABLE POWDER
(Formerly Conkeys Roup Remedy)
1 oz., 25c; 2½ ozs., 50c; 7 ozs., $1.00

CONKEYS DIA TABBS
25 Tablets, 25c; 125 Tablets, $1.00

CONKEYS NOXICIDE
Powerful disinfectant and germicide
Pt., 40c; qt., 60c; ½ gal., 90c; gal., $1.50

CONKEYS POULTRY TONIC
1½ lbs., 25c; 3¼ lbs., 50c; 7 lbs., $1.00; 12 lb. pail, $1.90; 25 lbs., $3.10

CONKEYS STOCK TONIC
1 lb., 25c; 2¼ lbs., 50c; 5 lbs., $1.00

CONKEYS COLD PILLS
75 pills, 35c; 175 pills, 75c

CONKEYS LICE POWDER
12 oz., 25c

CONKEYS POULTRY WORM POWDER
4 oz., 30c; 1 lb., $1.00

CONKEYS INHALENT
Soothing aid for mucous membranes of mouth, throat, nostrils. 4 oz., 65c.

AVICOL
For White Diarrhea Stops Chicks Dying

Avicol is positively guaranteed for both prevention and treatment. Easy to give. Simply drop it in the drinking water. It will pay you to give Avicol to all your chicks this year, and keep them healthy and free from disease. Prices: 50c and $1.00.

"T. S. F." Kills Chicken Lice On Both Young and Old

This is the method endorsed by the U. S. Department of Agriculture for killing all poultry lice. It never fails to do the work. Three sizes, 35c; 60c and $2.50. (If by mail, add 10c for postage and packing.)

DONSUNG Makes HENS LAY GUARANTEED

A wonderful tonic that acts directly on the egg-laying organs and is beneficial in every way. Makes chickens healthy, keeps them developing, and gets the eggs. Prices: 50c, $1.00 and $5.00.

The sure way to treat Colds, Roup and Canker. Used and endorsed by leading poultrymen everywhere. Prices: 50c and $1.00.

Group-Over

GERMOZONE

Germozone three times a week in the drink destroys disease germs taken in with the food or water. Keeps the crop pure and sweet. Corrects and prevents diarrhea and bowel troubles, also recommended for Roup, Colds, Canker, Swelled Head, etc. Prices: 12-oz. bottle, 75c; 32-oz. bottle, $1.50; ½ gal., $2.50; gal., $4.50.

A Triple Combination Worm Medicine containing Kamala (for Tape Worms), Nicotine Sulphate (for Round Worms) and Pyrethrum (for Pin Worms), all in an Insoluble Capsule.

Being Insoluble it therefore carries through to the gizzard.

	50	100
Adult	$ .75	$1.25
Pullet	.50	1.00
Chick	.40	.75

"Black Leaf" Worm Powder

Mixed with mash for flock treatment of roundworms.
4 oz., 100 birds.....75c 1½ lbs., 600 birds.....$3.00
3 lbs., 1200 birds.....$5.60

Vapo-Spray

Is the most effective medicine for colds, coughs, flu and pneumonia. With the first cough, treat the entire flock. 1 qt., 75c; ½ gal., $1.25; 1 gal., $2.00.

Leemulsion

An effective companion of Vapo-Spray is given in wet mash or soaked oats and acts exactly as a cough medicine does on humans. 12 oz., $1.00; 32 oz., $2.00; ½ gal., $3.50.

Toxite

Disease Control Spray — Controls poultry Coccidiosis, Round Worms and Red Mites which are transmitted by contaminated litter. 50c qt.; $1.50 per gal.

STAR FOUNTAIN AND FEEDER

Made of a single piece of rust-resisting metal. No solder, no seams, no loose parts. Suitable for feed as well as water. Little chicks cannot drown. Fits any Mason jar in 1-Pint, 1-Quart and 2-Quart sizes.

(Glass jar not included)

No. 32—Each ..... $ .10
No. 144—Tin plate, each ..... .10
No. 151—Crystal, each ..... .15

REEL TOP FEEDERS

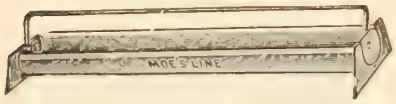
Chick Feeder, 4 adjustments, galv. iron, adjustable legs.

No. 290S—Length 24 inches, each.. $ .55
No. 292S—Length 36 inches, each.. .65
No. 294S—Length 48 inches, each.. .75

Broiler Feeder, 3 adjustments, galv. iron, adjustable legs.

No. 257S—Length 36 inches, each.. $1.25
No. 258S—Length 48 inches, each.. 1.50

DIXIE CHICK FEEDERS



The deep, half-round troughs have a turned-in flange to prevent waste. Easy to fill and clean.

The wire top guard keeps the chicks out, and is adjustable, so it can be raised as the chicks grow in size.

Galvanized Steel

No. 460—Length 18 inches, each.... $ .20
No. 462—Length 30 inches, each.... .30

GRILL TOP CHICK FEEDER

Has a hinged wire roost proof grill, galv. steel trough 4¼ in. wide by 2¼ in. deep with turned in edges to prevent waste. Adjustable legs.

	Each
No. 310S—Length 24 inches.....	$ .80
No. 293S—Length 36 inches.....	.80
No. 311S—Length 36 inches.....	.95
No. 295S—Length 48 inches.....	.95
No. 312S—Length 48 inches.....	1.10

BROILER FEEDER

No. 250S—Length 36 inches, each.. $1.35
No. 251S—Length 48 inches, each.. 1.60

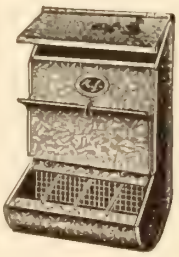
REEL TOP CHICK FEEDER

	Each
No. 335—Length 12 inches.....	$ .15
No. 336—Length 18 inches.....	.20
No. 337—Length 24 inches.....	.25
No. 338—Length 30 inches.....	.30
No. F14—Length 40 inches.....	.40

LEADER CHICK FEEDER

No. 520—Length 13 inches, 16 holes $ .15
No. 521—Length 23 inches, 32 holes. .25

DRY MASH HOPPERS



A strictly high quality hopper, properly designed. The curved bottom keeps the feed in easy reach, and the taper shape of the hopper prevents the feed from clogging. Height 19 inches.

	Each
No. 13—Width 18 inches	$1.40
No. 37—Width 24 inches	1.70

GRIT BOXES

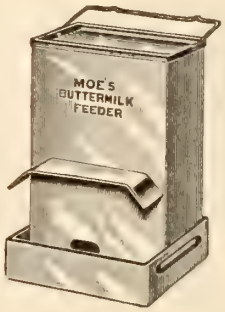
Economical and practical for feeding grit, shells, etc.

Thoroughly well made, no solder used in their construction.

	Each
No. 9—3 Compartments	$..90
No. 90—4 Compartments.....	$ .90

No. G12—12 inch, one compartment 1.00

DROP BOTTOM FOUNTAINS



Drop Bottom, easy to fill and to clean. Has wire handle and may be hung on the wall out of the litter and dirt.

No. 41—Galvanized, 1 gallon, each.. $ .90
No. 136—Tin, Buttermilk Feeder, 1 gallon, each 1.25

ALUMINUM LEG BANDS

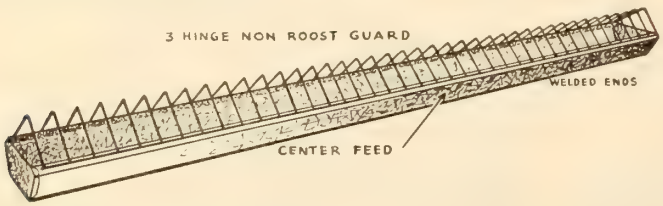
No. 130—Aluminum, with raised numbers.

Pkg. of	12	25	50	100
Price.....	$ .15	$ .20	$ .30	$ .50

SPIRAL BANDS

Available in ten colors.

Size	Per 100
1/4 inch.....	$ .15
3/8 inch.....	.20
9/16 inch.....	.35
11/16 inch.....	.40
3/4 inch.....	.45



CHICK FEEDERS AND WATERERS

F2-G—Designed for day old chicks to eight weeks. 4 inches wide, 2 inches high, 28 inches long, weight 2 lbs. 35c each.

REEL GUARD FEEDER

Galvanized, one piece, square bottom with tapered sides.

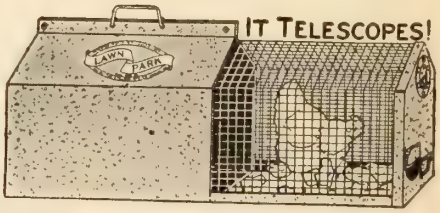
F0—12 inch..... $ .15
F1—18 inch..... .20
F2—24 inch..... .25
F7—48 inch..... .90

GROWING FEEDERS

Model	Length	Grid Spacing	Price
F-3	30 in.	1-5/8 in.	$ .85
F-4	48 in.	1-5/8 in.	1.35
F-40	40 in.	2-1/2 in.	1.00
F-4-D	48 in.	2-1/2 in.	1.50
F-4-H	48 in.	2-1/2 in.	1.35

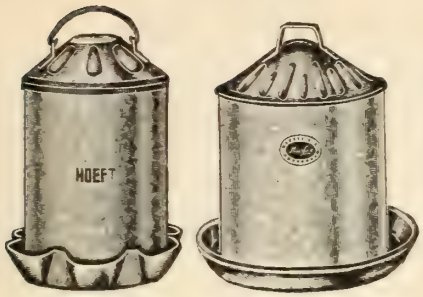
No. F62G—Length 60 inches; grid spacing 2½ inches; with Galvanized Iron Legs, $2.50.

"LAWN PARK" BROOD COOP



Size when extended, 18 inches wide, 19½ inches high, and 48 inches long. Not Mailable. Price, $3.50.

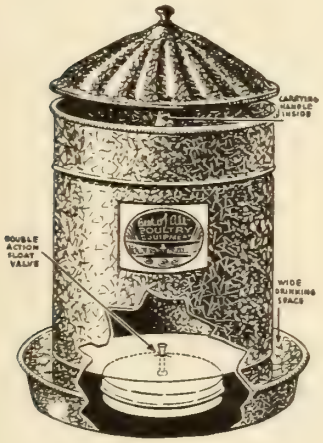
FOUNTAINS



No. 159 No. 268

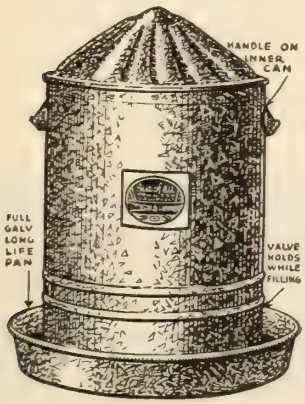
No. 158—1 gal. $.65 No. 268—1½ gal. $1.25
No. 159—2 gal. .80 No. 269—3 gal. 1.70
No. 270—5 gal. 2.20
W2—4 qt..... .50 W3—8 qt..... .80
Stand for No. 268, 20c; No. 269, 25c; No. 270, 30c.

FLOAT FOUNTAINS



No. W13—2½ gal. $1.50
No. W14—5 gal. 2.25
No. W15—8 gal. 3.40

TOP FILL FOUNTAINS

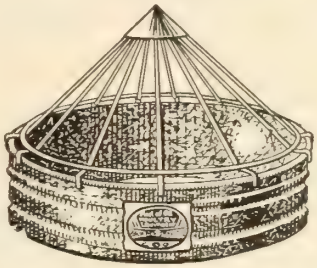


No. W22—2 gal. $1.35
No. W23—3 gal. 1.65
No. W25—5 gal. 2.40
No. W28—8 gal. 3.40
Stands for above, extra 1.60

LEADER FOUNTAIN

Bottom filled; galvanized. Easy to fill and clean, one gallon capacity.
No. 530 ..... $ .35

FEEDER AND WATERER



W-5—14 in. dia., 4¼ in. high, 10 qt. capacity. $1.00 each.

W-6—16 in. dia., 4½ in. high, 16 qt. capacity. $1.35 each.

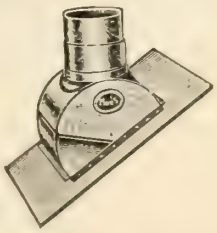
AUTOMATIC FOUNTAIN

Each
No. 30—Automatic Valve and Float only ..... $ .95

FOUNTAIN AND BROODER HEATER

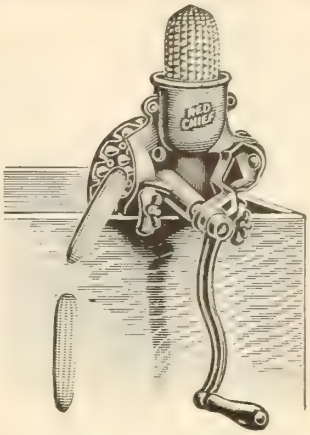
Can be used with all styles of fountains, and effectively prevents water from freezing. It is also an excellent heater for small brooders.
No. 10—Each $1.80

ADJUSTABLE ROOF SADDLE



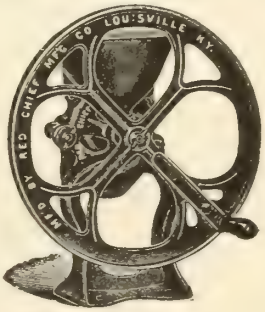
No. 440—For 4-inch pipe $1.55
No. 441—For 5-inch pipe 1.60

RED CHIEF HAND CORN SHELLER



Clamps on barrel or box; has patented oval-shaped teeth, shelling the corn without cracking the grains. It shells very easily and throws out the cob every time. Price, $2.25.

RED CHIEF RAPID GRINDING MILL



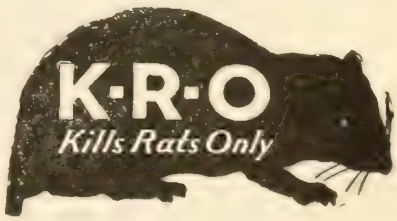
It is built on scientific lines and combines all the elements which make up the most satisfactory Hand-Power Mill for grinding small grain. The burrs are extra hardened and self-sharpening; they cut; do not smash.

No. 1—For small poultry raisers. Capacity 1 to 2 bushels per hour. $3.65.

No. 2—Is operated by a crank; chains or bolts to a box as desired. Has hooks on which to hang a bucket. Capacity 2 to 3 bushels per hour. Price, $5.00.

No. 5—Has a fly wheel which makes the Mill run steady. and requires the least possible power to turn it. It fastens by chains or bolts. Capacity 2 to 4 bushels per hour. Price, $6.50.

No. 10—This Mill has beautiful outlines, as shown in illustration; will grind any kind of small grain; also oyster shells and dry bone. Capacity 2 to 4 bushels per hour. Price, $8.50.



Not a poison, will not kill livestock, dogs, cats or poultry.

2 oz. (Mix with 2 lbs. bait) $ .75
Ready Mixed—6 oz ..... .35

Poultry Waterer

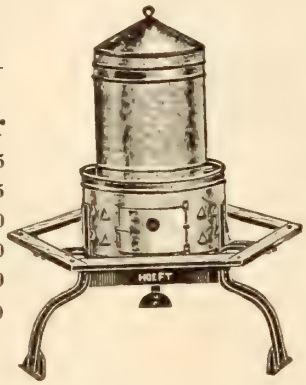
Ten gallon capacity, Kerosene or Electric Heated, with perch and legs.

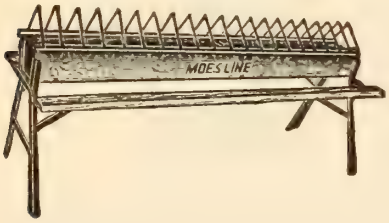
No. L10HB—With single burner flueless lamp, weight 31 pounds. Price, $9.75 each.

No. L10EB—Base insulated and ready to receive electric light socket, weight 30 pounds. Price, $9.95 each.

Fountain and Heater

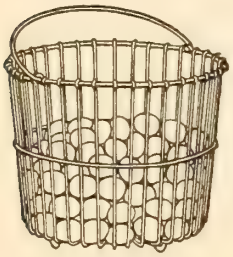
No. 424—3 gal.....$3.75
No. 425—5 gal..... 4.45
No. 424S—With Stand..... 6.00
No. 425S—With Stand..... 6.30
W25HS—5 gal., with stand 5.80
W15HS—8 gal., with stand 6.80





Flock Feeder

No. 373—Length 3 ft. with stand $3.40
No. 375—Length 5 ft. with stand 4.45
No. 378—Length 8 ft. with stand 6.25
No. F51—Length 5 ft. with stand 3.95



PATENT PENDING

Wire Egg Baskets

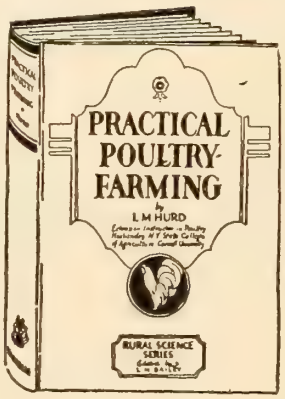
Heavy galvanized wire, electrically welded, capacity 12 to 15 dozen.

No. 78.....$ .75 each

China Nest Eggs

White opal glass, natural in appearance, and uniform in sizes. 30c dozen.

PRACTICAL POULTRY FARMING, by L. M. Hurd. Here are practical, useful, and money-making ideas on raising poultry for profit. Complete in every detail. The only book which tells the vitamin content of poultry feeds. 149 illustrations, 405 pages. $2.50.



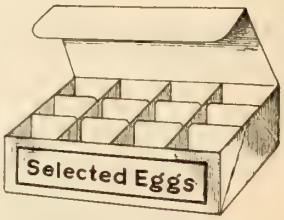
Poultry and Produce Scale

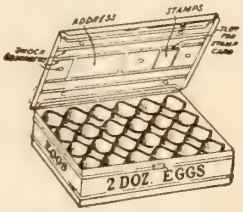
No.812A—Used by grocers, butchers, fruit dealers, etc. Also a reliable scale for use in the home, giving an accurate check on household purchases and supplies. Capacity 20 pounds by ounces; heavy steel throughout, equipped with a special tempered Hanson spring and gravity rack, adjusted by set screw at top, 6½-inch dial, 28-gauge steel; figures in black on white enamel. Finish Black Japan and decorated in gold. Has a heavy prime galvanized machine-made scoop and chains. Height overall 28½ inches. Scoop size 18 by 14 inches. (Weight 5 pounds.) Price, $3.15.

No. 8910—Spring balance. Capacity 100 lbs. by 1 lb. $2.25.

Egg Cartons

These pasteboard egg cartons are just the thing for safely and quickly packing eggs in one dozen lots for delivery to your retail customers. The appearance and convenience of the package will increase your sales. 12c doz.; $1.00 per 125; $1.85 per carton of 250 (weight 27 lbs.). $7.00 per 1000. Postage extra.





Metal Egg Crates

For Selling Eggs By Mail

Indestructible; pays for itself in a few shipments; lasts years: makes interchangeable shipping easy. Buy yours now and realize more money for your eggs. Your friends want them.

1-dozen size	$1.00	6-dozen size	$2.00
2-dozen size	1.25	9-dozen size	2.50
3-dozen size	1.50	12-dozen size	3.00
4-dozen size	1.75	15-dozen size	3.50

Postage Extra.

EGG PRESERVATIVE

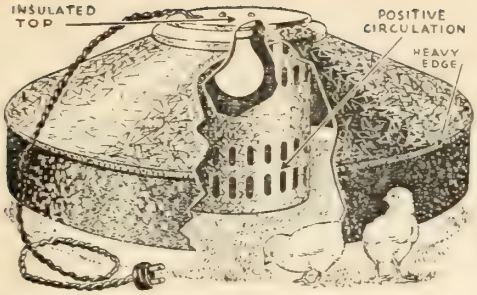
Mix 1 part with 9 parts of water. 1 qt., 30c; 1 gal., $1.00.

CEL-O-GLASS—VIO-RAY

Now guaranteed for 5 years. Unbreakable weather proof, transmits violet rays (Glass does not). Ideal for poultry house, fronts, windows and doors, and many other uses. Standard Roll, 36 inches wide, 100 feet long, 36c per running foot.

VIO - RAY WINDOW FABRIC

Scientifically processed white cloth, thin enough to admit violet rays, and yet strong enough for all weather. Sq. yd., 23c; 10 sq. yds. or more, 20c.



C-1 FLOOR BROODER

For the progressive small flock raiser who knows the advantages of electricity.

C-1 is fitted with socket for light bulb, 6 ft. of cord and curtain. (Bulb not furnished.)

C-1—22 in. diameter, bulb heated, 75-100 chicks, 8 lbs., price..... $2.50

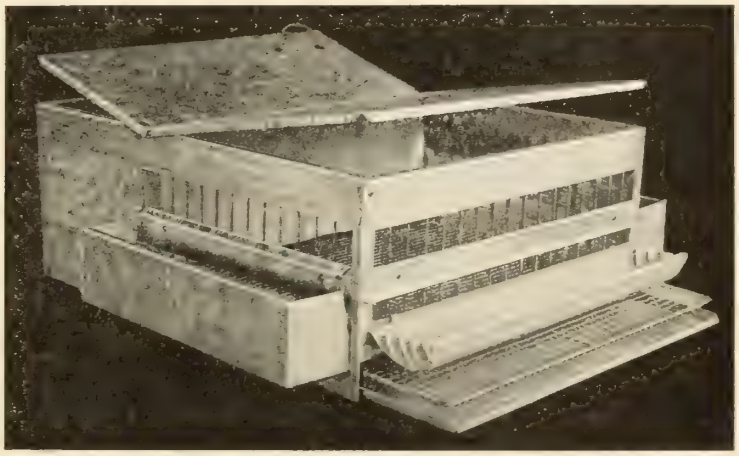
WAFER THERMOSTATS

Three inch double brass wafers filled with a special compound to operate on low brooding temperatures as well as in incubators. Stop your loss this year. Do not use old wafers. Give your brooders and incubators a fair chance. Order new wafers now. Specify plain or screw stud. **25c each.**

BROODER THERMOMETERS.....35c
INCUBATOR THERMOMETERS on stand 60c; 75c
LITTLE PUTNAM STOVE, each.....$2.25
PUTNAM BROODER STOVES.....$4.95

ELECTRIC CANOPY BROODER

B-13—A steep pitch canopy which prevents roosting, ventilator furnishes a continuous circulation of air without drafts. Made of 26 gauge galvanized; heavy curtains, adjustable legs, has two independent heating circuits of 500 watts each—1,000 watts. Wired for 110 volts, can also be wired for 220 volts. Capacity 500 chicks, size 50 in. by 50 in., weight 75 lbs.....$21.75
B-9—30 in. diameter, elec. automatic heat.. 8.15



B-1 Junior Battery

B-1 JUNIOR BATTERY

(As Illustrated at Right)

A new box brooder giving all the wonderful results and low labor cost of the Battery system. Designed for the raiser of small flocks. So successful that it is being adopted by many big operators. Note the open sides and ample ventilation. Chicks will not develop rapidly in a closed tight brooder. This Brooder has a 150 Watt "Beacon cement coated" heating element controlled by a quick make and break non-radio interfering Thermostat, the finest tinned floors you ever saw.

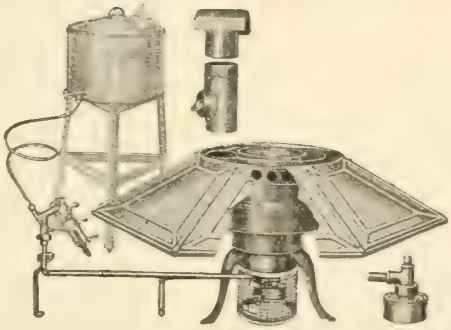
Dimensions: 24x30 inches. Capacity, 80 day-old chicks. Weight, cartoned, 26 pounds. $8.95.

B2—20x24 inch, bulb heated, with feed and water pans, $4.50.

ELECTRIC BROODERS

56-in., 375-chick $14.00
65-in., 550-chick 17.50

HUDSON OIL BROODERS

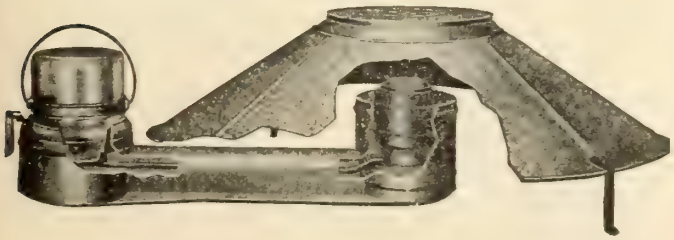


No. 256—Completely enclosed in a 54-inch Hexagon-shaped Hover. Drum 22 inches in diameter, 8 inches deep. Combustion chamber 9 inches in diameter, 10½ inches long, 18-gauge. Over-all height 24½ inches. 8-gallon fuel tank. Recommended for houses up to 14x14 for 500 to 1,000 chicks. Without Fuel Stand. $18.95.

No. TS3—Fuel Stand, $1.20.

No. 367—With 66-inch Hexagon-shaped Hover. Recommended for houses up to 14x16 feet for 750 to 1,500 chicks. Without Fuel Stand. $23.85.

AUTOMATIC OIL BROODER



Brazed Oil Assembly. Wire Edged Canopy. Attractive Steel Shell, Thermostat Control. Unexcelled Wickless Blue Flame Burner. Entire Simplicity.

42-in. Canopy—Capacity 250 chicks, weight 44 pounds..$11.50
52-in. Canopy—Capacity 500 chicks, weight 52 pounds.. 12.00

MOES OIL BROODERS

No. 237—42-in. canopy, 5 gal. fuel tank, no stand.....$17.75
No. 238—54-in. canopy, 10 gal. fuel tank, with stand.... 20.95

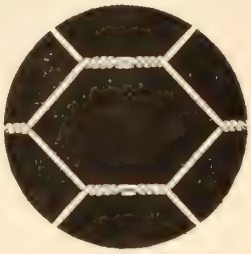
COAL BURNING BROODERS

	No. A-15	No. A-16
Capacity	500 chicks	750 chicks
Diameter of Hoover	52 inches	56 inches
Price	$18.38	$21.15

POULTRY NETTING

GALVANIZED AFTER WEAVING 150-FOOT ROLLS

Straight Line



Hex-Cel

2-inch Mesh

	19 gauge	20 gauge
12-inch	$1.20	$1.05
24-inch	2.15	1.90
36-inch	2.95	2.55
48-inch	3.85	3.45
60-inch	4.75	4.15
72-inch	5.60	4.95

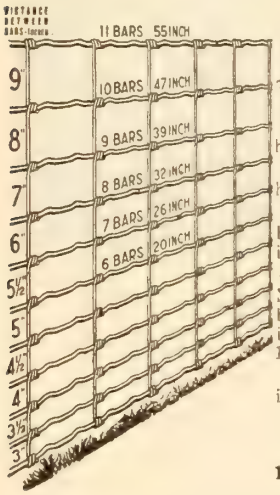
1-inch Mesh

	20 gauge
12-inch	$2.10
18-inch	3.00
24-inch	3.85
36-inch	5.75
48-inch	7.35

25 to 150 foot lengths.

2-inch mesh 1c per sq. ft.

1-inch mesh 2c per sq. ft.



AMERICAN FARM FENCE

Thoroughly galvanized, with hinge joint patent lock knot. Let us send descriptive folder.

No. 635—6 strands, 35 inches high, 12-inch stays, per rod, 32c.

No. 845—8 strands, 45 inches high, 12-inch stays, per rod, 45c

No. 832—8 strands, 32 inches high, top and bottom wires No. 9, intermediate and stay wires No. 1, 6-inch stays, 60c.

No. 1047—10 strands, 47 inches high, top and bottom wires No. 9, intermediate and stay wires No. 11, 12-inch stays, per rod, 60c.

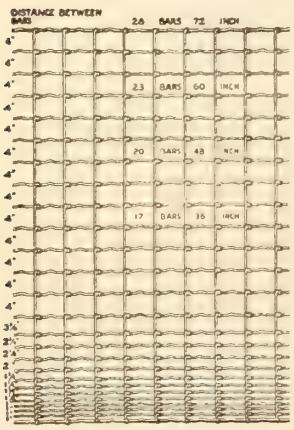
No. 1047—As above, but with 6-inch stays, per rod, 75c.

Put up regular in 20-rod Rolls.

Prices subject to change.

10-Rod Rolls, 25c per Roll Extra.

PIONEER POULTRY FENCE



No. 1948—48 inches high, top and bottom wires No. 11, intermediate and stay wires No. 14½, 6-inch stays, per roll of 165 feet, $6.35.

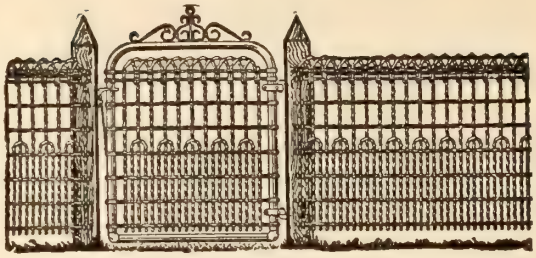
No. 2158—58 inches high, top and bottom wires No. 11, intermediate and stay wires No. 14½, 6-inch stays, per roll of 165 feet, $7.00.

No. 2672—72 inches high, top and bottom wires No. 11, intermediate and stay wires No. 14½; 6 inch stays, per roll of 165 feet, $8.75.

LIBERTY POULTRY FENCE

10-rod Roll,
4 feet high....$4.25
6 feet high.... 5.50

ORNAMENTAL LAWN FENCE

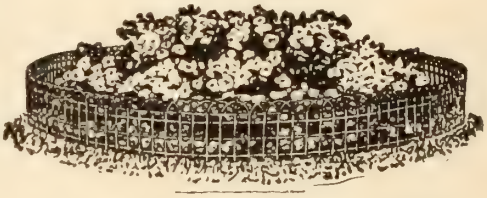


Very attractive and we believe the most durable wire lawn fence made. Heavy galvanized. Spaces, 1½ inches; wire, No. 9½ Crimped Pickets in No. 13 Tw. Cables.

	Single Loop	Double Loop
36-inch	$ .09 ft.	$ .12 ft.
42-inch	.10 ft.	.13½ ft.
48-inch	.11 ft.	.15 ft.

150 ft. rolls deduct 1c per ft.

FLOWER GUARD



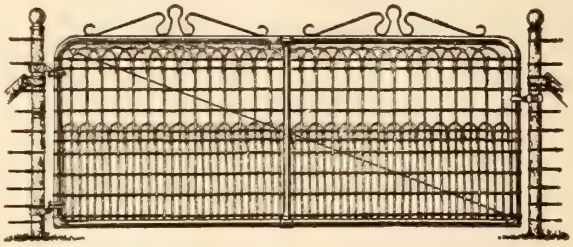
Designed for protecting Flower Beds

16-inch, per foot.....6c 22-inch, per foot.....7c

TRELLIS WIRE

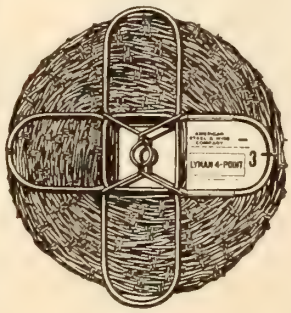
Trellis—18-inch, 8c ft.; 24 inch.....9c ft.

ORNAMENTAL GATES



Heavy steel frames, filled to match the fence; fittings for Jr. 1¾ in. posts included.

Height	Distance Between Posts 3 ft.	3½ ft.	4 ft.	8 ft.	10 ft.
36-inch	$3.40	$3.55	$3.70	$8.15	$9.40
42-inch	3.55	3.65	3.80	8.30	9.60
48-inch	3.65	3.80	3.95	8.45	9.75



BARBED WIRE GALVANIZED

Hog—4-point, 12-gauge, 4 inches between barbs, 80-rod $3.85

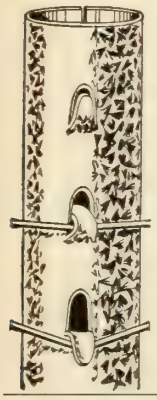
Cattle—4-point, 12-gauge, 6 inches between barbs, 80-rod $3.65

PRIME ELECTRIC FARM FENCE

After careful inspection of the many electrical farm fences on the market we are convinced that **Prime** is the best, safest and most economical of them all.

No. 470—AC CHAMPION, 110-120 volt.....$39.50
No. 720—FIELD KING, 6 volt Battery Portable (less battery).....$44.50
Other models as low as $18.75.
P-1—Standard Insulators, 2c each.
P-2—Weatherproof Insulators, 2c each.
P-3—16 Penny Double Head Nails, 40c each.
P-23—End and Corner Post Insulators, 5c each.
P-500—7-inch Gate Handles, 25c each.
P-501—Gate Springs, 15c each.

Let us send descriptive catalogue and prices on the above and other models.



TUBULAR STEEL POSTS

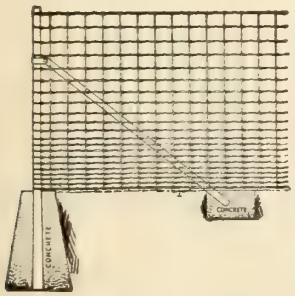
	Painted	Galv.
5-foot	..	$ .50
6-foot	$ .45	.55
6½-foot	.48	.58
7-foot	.52	.62
7½-foot	.56	.65
8-foot	.60	.70

Special Prices on Quantities

Ball Tops for Line Posts, 23c; Pig-Ear Latch, 75c; Driving Caps for Line Post, 36c.

JUNIOR CORNER POSTS

Painted		Galvanized	
6-foot	$1.65	6-foot	$1.85
8-foot	2.20	8-foot	2.45



JUNIOR END POST

Painted

6-foot	$1.20
8-foot	1.60

Galvanized

6-foot	$1.50
8-foot	1.80

SELF-FASTENING U POSTS

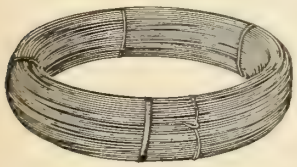
3-foot (no anchor)	$.20	7-foot	$.48
5-foot	.35	7½-foot	.50
6-foot	.40	8-foot	.54
6½-foot	.45		

CHAMPION WIRE STRETCHER

No. 1 has hickory handle and malleable clamp; can be quickly adjusted, and is a favorite with fence builders. Price, $1.50.

BALE TIES

9½ feet, No. 14 gauge, bdl. 250.....$2.15



GALVANIZED FENCE WIRE

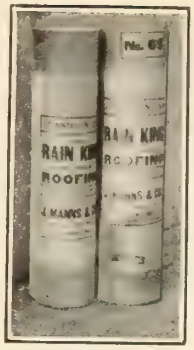
	5 lbs.	10 lbs.	25 lbs.	100 lbs.
No. 9	$ .35	$ .60	$1.35	$4.75
No. 12	.40	..	1.40	5.00
No. 14	.45	.65	1.50	5.50
No. 16	.50	.70	1.70	6.25
No. 18	.55	.80	..	..

HARDWARE CLOTH

2x2	$ .05 sq. ft.	4x4	$ .06 sq. ft.
3x3	.05½ sq. ft.	8x8	.07 sq. ft.

100 sq. ft. or more deduct 1c per sq. ft.

ROOFING MATERIAL



SMOOTH SURFACED

	Weight Lbs.	Per Roll
Rain King, light	35	$1.15
Rain King, medium	45	1.65
Rain King, heavy	55	1.90
Rain King, extra heavy (Underwriters' label)	65	2.65
Contoid, super weight	75	2.95

SLATE SURFACED (Green)

Rain King	75	2.15
Balmar	75	2.45

TARRED SLATERS FELT

500 square feet	30	1.25

KURE-A-LEAK

A semi-liquid mastic or cement-like composition, not affected by extreme heat or cold; absolutely water tight and fireproof. It "kures" the leaks in wornout tin, galvanized iron or composition roofings. 1 gal., 75c; 5 gals., $2.15.

CHANNELDRAIN ROOFING

Made of

COP-R-LOY

The Copper-Alloyed Steel That Resists Rust and Corrosion

28 Gauge
6c per sq. ft.

HUDSON MASTER STALL

Specifications

Horizontal Top Rail, 1½-in. carbon steel tubing.

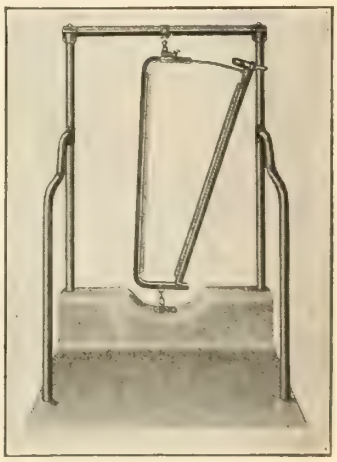
Partitions and Uprights, 1⅝-in. OD, carbon steel tubing.

Fittings, improved dustproof design.

Anchors, continuous double angle iron.

Width, regular 3 ft. 6 in.; other widths available.

No. 1A, less stanchion, $6.65.



HUDSON COW STANCHIONS

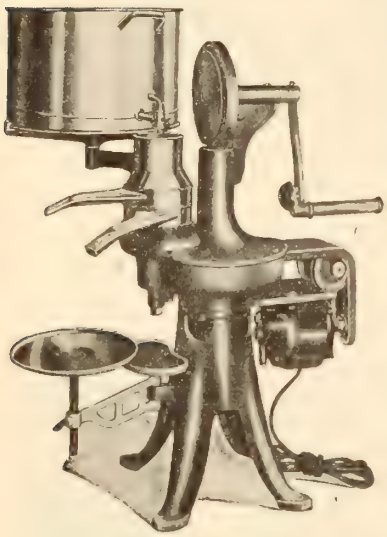
No. 181—Steel U-Bar Stanchion with heavy steel fittings; no castings used. Cow-proof latch made of press steel. $2.25

No. 193—Made of high carbon U-Bar with or without wood linings. Patented, quick-acting latch, double lever type. Cow-proof. Adjustable neck space. Plain steel. $3.25.

No. 193W—Wood-lined stanchion. $3.65.

DAIRY SUPPLIES

NEW E-Z AMERICAN SEPARATOR



No other separator gives you the advantages of the newly-developed American. Gets ALL the cream, low speed preventing frothing; bowl needs no rebalancing, new polished stainless steel discs, unmatched for easy turning, only separator with waist-low supply tank; greatest value for price charged. A size for any capacity. We offer the following three models for comparison.

Smaller models at exceedingly low prices. Let us quote.

No. 50, Regular Dairy Style, Upright—Capacity 500 pounds of milk per hour. Skims about 62 quarts in 15 minutes. Price, $72.60.

No. 50, Electric, with Standard make Motor, as shown in illustration. Price, Complete, $102.24.

CROWN CREAM SEPARATOR

2½ gallons, capacity 1 to 2 cows.....$5.00
4 gallons, capacity 3 to 4 cows..... 5.25

DAIRY THERMOMETERS, each.....40c

PARCHMENT BUTTER PAPER

Is furnished in sizes 9x12, 6x9. Price, per pound, 25c. By mail, add regular Parcel Post rate.

HAND BUTTER PRINTS

½-lb. Seeley Pattern, as shown in cut .....$ .65
Baltimore Pattern 1.25
Round Print and Mould..... .45

DANDELION BUTTER COLORING

Small size to color 500 pounds.....$ .35
Medium size to color 1250 pounds..... .65
Large size to color 2800 pounds..... 1.00

STRAINER PADS

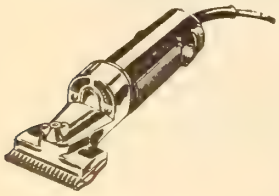
Plain round rapid-flo filter disks for sanitary milk production.

6-inch, 300 for.....$ .94
6½-inch, 300 for..... 1.12

MILK CANS

Made of special heavy cold rolled milk-can material. One of these cans will outlast two of the common light-weight cans. Sold at very attractive prices. 5-gallon size only.
No. 1205—Umbrella Cover, 13 pounds empty, each.....$4.50

STEWART ELECTRIC CLIPMASTER



The finest, fastest animal clipper ever made. Light, easy to handle, powerful and fast. Air cooled ball bearing motor, perfectly insulated and shock-proof, convenient balanced handle barely 2 inches in diameter. 20 ft. cord, weight 6 lbs. **No. 21**—110-120 volt AC or DC current, **$17.95.**

CYLINDER CHURN

Made of selected white cedar and well put up.

Full Churning Capacity

Number	1	2	3	4
Gallons	1½	2	3½	6
Price	$4.00	$4.75	$5.50	$6.25

BARREL CHURN

Oak stave; steel top; it works by concussion and will not break the grain of the butter nor make it of a salvy consistency.

Number	0	1	2	3	4	5	6
Gals. ch'rn'd	3	5	7	10	13	18	30
Price	$7.50	$8.50	$9.75	$11.50	$14.00	$16.00	$30.50

STANDARD GLASS CHURNS

Specially designed jar with sloping rounded corners and large mouth, perforated strainer built into lid, four blade hard maple dasher.

Size	Churns	Price
2 quart	1 quart	$1.45
4 quart	2 quart	2.40
6 quart	3 quart	2.95
8 quart	4 quart	3.65

STERLING

ICE CREAM FREEZERS

Sturdily built White Cedar Pails with electric welded wire hoops, frames, locks and catches heavily galvanized; tall tin-plated cans.

STERLING.....3 qt., $2.95; 4 qt., $3.50; 6 qt., $4.95
SNOWBALL (Triple Motion) .....4 qt., $5.00
DOUBLE QUICK .....2 qt., $1.00

BAG BALM

Soothing, penetrating ointment, especially adapted for serious and annoying troubles known as caked bag, cow pox, chapped, cracked and sore teats, chafing and inflammation of all kinds. 60c.

KOW-KARE

The Great Cow Tonic and Conditioner for toning up the appetite and stepping up milk production through its action as a stomachic of genuine merit, an alterative and general regulator of cows subjected to modern conditions of forced production.

1¼-pound can.....Price, $ .65
2¾-pound can.....Price, 1.25

CONKEY'S FLY KNOCKER

The best preparation on the market for keeping flies off cattle and horses. Easily sprayed on and retains its strength all day, allowing the cows to pasture without annoyance, and therefore assists in the production of milk. Qt., 60c; gal., $1.50.

CONKEY'S CALF MEAL

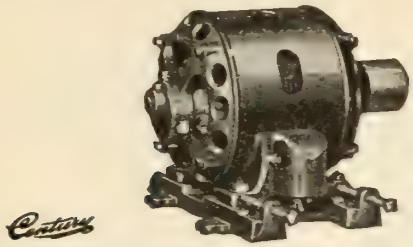
Quality is of more importance in Calf Meal than in any other feed; it pays to buy the best. The advantages in feeding it are many. 1. It saves milk. 2. It costs less to feed. 3. It makes better veals. 4. You can raise your own dairy cows on it cheaper than they can be bought. 5. It leaves more milk to sell, and more profit to you. Satisfaction guaranteed. 25 lbs., $1.25; 100 lbs., $4.45.

ROCK SALT

2c per lb.; $1.50 per 100 lbs.

MISCELLANEOUS FARM SUPPLIES

CENTURY ELECTRIC MOTORS



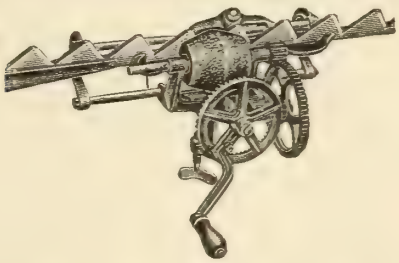
Repulsion Start Induction Single Phase Motors fill the demand for motors where high starting torque, low starting current, quiet and automatic operation are desirable.

The ¾ Horse Power and smaller are equipped with the Century Wool Yarn System of Lubrication, which insures proper lubrication for at least one year of continuous operation. The larger sizes are equipped with ring oilers. The brushes are in service and touch the commutator only while starting.

All prices listed below are for 110/220 volts, 60 cycle ratings. Pulleys and rails extra.

Horse Power	Syn. Speed	Standard Pulley Diam.	Face	Bore	Prices
⅙	1750	2	2	½	$10.55
¼	1750	2½	2½	⅝	11.85
½	1750	3	2½	¾	22.50
¾	1750	3	2½	¾	29.50
1	1750	3	3	¾	37.00
1½	1750	4	3½	1	49.00
2	1750	4	3½	1	64.00

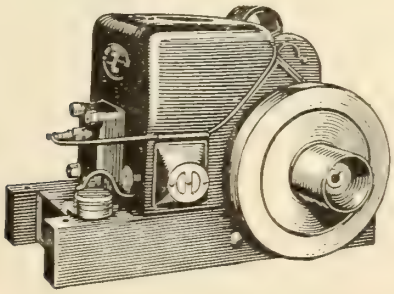
No. 82 TOOL GRINDER



This very useful grinder is especially suited to farm work and can be easily clamped to a mower wheel or bench; compact, simple and serviceable.

82—With Bevel Tool Wheel only $6.00
83—With both Flat and Bevel Tool Wheels 7.00
Bevel Wheel only 1.40

FAIRBANKS MORSE TYPE "Z" ENGINES

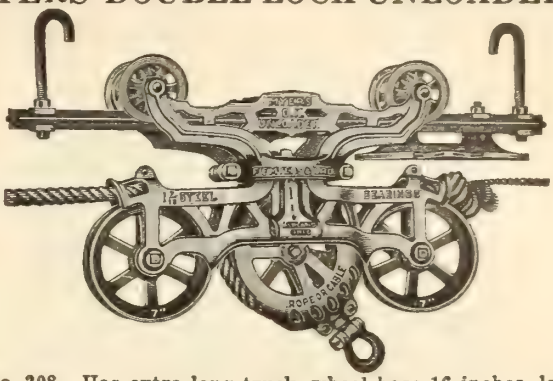


Compact, self-oiling, fully enclosed and yet easily accessible. Designed to meet the present and future demands of users of small engines. Equipped with guaranteed ignition, Type "R" Rotary High Tension Magneto. Easy to start, magneto sealed against dirt, dust, water and oil. Let your next engine be a "Z" and learn what real dependability is.

1½ H. P. ..... $60.75 3 H. P. $95.50

Let us quote larger sizes on request.
1½ Horse Power Illustrated.

MYERS' DOUBLE LOCK UNLOADERS



No. 208. Has extra long truck, wheel base 16 inches, large steel bearings, 7-inch sheaves, reversible and swivel, for double steel track, designed for heavy work. Price, $15.00.

MYERS' CLOVER LEAF UNLOADER

No. 118. This is the well-known reversible car for double steel track. The locking device grasps the fork pulley on either side and permits it to swing free. Price, $12.00.

Double Steel Track. Price, per foot, 25c.
Hanging Hooks. For double steel track. Price, each, 20c.
Rafter Brackets. Steel. Price, each, 5c.
Pulleys, 6-inch; wood sheaves; malleable iron frame. Price, each, 90c.
Pulleys. Knot-passing swivel; 6-inch malleable iron sheave. Price, each, 95c.
Double Harpoon Forks. All steel. Price, each, $3.00 to $7.00.
Floor Hooks, ¾-inch wrought iron. Price, each, 19c.

WAGNER BARNDOOR HANGER

Tandem, Ball-Bearing Rollers, per set $2.10
No. 15 Tubular Steel Track, per foot ..... .25
No. 100 Evertight Steel Track, per foot ..... .45
Steel Brackets, each ..... .20

RURAL MAIL BOX

Body made of No. 20 gauge galvanized steel, door No. 18 gauge, bottom and rear No. 20 gauge. Inside of box has a corrugated drain board to provide for any water accumulation. Finished in aluminum bronze, flag bright red enamel. Size of box 23½ inches long, 11¼ inches wide, 14 inches high. Price, $2.50.

No. 1—18¾ in. long, 6⅜ in. wide, 8¾ in. high. Price $1.15.

Root QUALITY BEE SUPPLIES

Let Us Send Complete Free Catalog
For Quick Service
Mail Your Orders To Us
Prices F. O. B. Baltimore

WOOD PUMPS

Porcelain Lined—Ready to Set in the Well
Subject to Cash Discount

Depth of Well	No. 2 6x6	No. 5 7x7	Depth of Well	No. 6 6x6	No. 4 7x7
8 ft.	$13.20	$15.80	29 ft.	$25.30	....
9 ft.	13.60	16.20	30 ft.	25.90	....
10 ft.	14.05	16.55	31 ft.	26.90	$29.15
11 ft.	14.40	16.85	32 ft.	27.90	30.15
12 ft.	14.65	17.15	33 ft.	28.90	31.15
13 ft.	15.00	17.45	34 ft.	29.90	32.15
14 ft.	15.25	17.75	35 ft.	30.90	33.15
15 ft.	16.00	18.30	36 ft.	31.90	34.15
16 ft.	16.50	18.90	37 ft.	32.90	35.15
17 ft.	17.50	19.70	38 ft.	33.90	36.15
18 ft.	18.15	20.50	39 ft.	34.90	37.15
19 ft.	18.50	20.80	40 ft.	35.90	38.15
20 ft.	18.80	21.20	41 ft.	36.90	39.15
21 ft.	19.30	22.50	42 ft.	37.90	40.15
22 ft.	20.00	23.00	43 ft.	38.90	41.15
23 ft.	20.70	23.70	44 ft.	39.90	42.15
24 ft.	21.00	24.00	45 ft.	40.90	43.15
25 ft.	21.35	24.35	46 ft.	41.90	44.15
26 ft.	22.30	25.30	47 ft.	42.90	45.15
27 ft.	23.40	25.90	48 ft.	43.90	46.15
28 ft.	24.70	26.25			

We shall be pleased to quote attractive prices on Galvanized Pipe.

PUMP HEADS

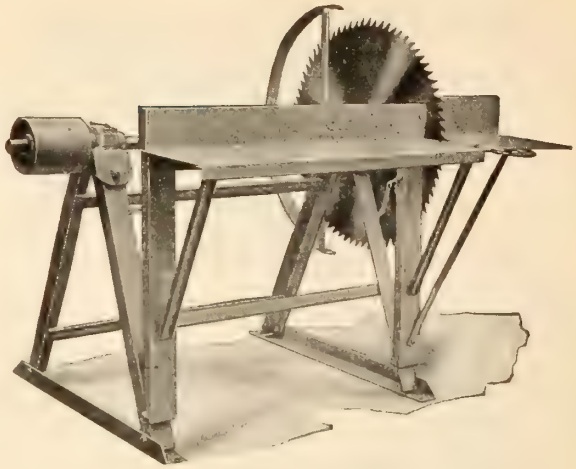
Length	6x6 No. 2 Porcelain-Lined	6x6 No. 6 Deep Well
6 ft.	$11.00	$8.50
7 ft.	11.75	9.25
8 ft.	12.50	10.00
10 ft.	14.50	12.00
12 ft.	16.50	14.00

PITCHER PUMPS

No. 2—3 inch $2.00

No. 3—3½ inch 2.40

FARM SUPPLIES



SAW FRAMES

(Blades Extra)	No. 9 Steel	No. 5 Wood	No. 4 Pony
Frame Only	$21.95	$20.95	$14.45
With Flywheel	25.00	24.75	16.50

BLADES (Crosscut)—Bore 1⅜-inch
18-inch, $3.00; 24-inch, $4.95; 26-inch, $5.50; 28-inch, $6.40; 30-inch, $7.35.

LADDERS

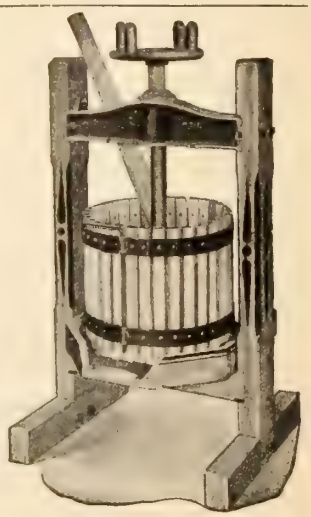
Made of the very highest quality lumber and assembled to give the safest, most durable and most rigid construction. Side rails made of the best selected Norway, Southern Pine or Spruce and the rungs are Hickory. Equipped with sturdy gravity catches, rope and pulley.

LIBERTY EXTENSION LADDERS

20 ft.	$ 7.95	24 ft.	$ 9.85
28 ft.	11.45	30 ft.	12.25
32 ft.	13.10	36 ft.	15.45
40 ft.	17.25		

STRAIGHT LADDERS, 10 to 16 ft., 32c; 18 to 22 ft., 34c

RED CROSS CIDER MILLS AND WINE PRESSES



SINGLE CAGE CIDER MILL, Hinged Tub	$18.50
JUNIOR 2-CAGE CIDER MILL	23.25
MEDIUM 2-CAGE CIDER MILL	27.50
SENIOR 2-CAGE CIDER MILL	36.75
No. 1A FRUIT PRESS, Hinged Tub	9.00
No. 2C FRUIT PRESS, Hinged Tub	11.75
No. 3 FRUIT PRESS, Hinged Tub	19.50
No. 5 FRUIT PRESS, Hinged Tub	26.75
RATCHET EXTRA on Nos. 3 or 5	3.50

SOIL IMPROVEMENT

Look to your Soil for therein lies the very foundation of your farming or gardening success. Does your soil need plant food? If so, what elements are lacking? Does it need lime? How much lime? Or, does it need acid?

Accurate answers to these questions are worth many dollars to every grower because they often mean the difference between a successful crop and a poor crop. Save money and increase your profits by **knowing** the possibilities of your soil in relation to the chemical requirements of the crop you plan to grow.

The accompanying chart and tabulation of varieties show that most vegetables thrive best in a slightly acid soil. It is very necessary however, to first know the pH (or degree of acidity) of your soil as determined by soil tests, before applying acid or lime, rather than by guesswork. The desired amounts of nitrogen, phosphorus and potash should also be determined as a matter of economy. Use a soil test kit and feed your soil the elements which are needed.

PLANT FOOD ELEMENTS

Plants require nitrogen, phosphorus, potassium (the three most important), oxygen, hydrogen and carbon (obtained from air and water) and the minor elements usually found in the soil in sufficient quantity but also supplied in the better brands of mixed fertilizers.

These minor elements are calcium, sulphur, magnesium, manganese, iron and boron. Their functions are largely indirect, but very essential as they aid the chemical changes which render other ingredients more available. Calcium (lime), for example, aids in making the nitrogenous materials more quickly available and changes the physical nature of soils. Sulphur seems to exert a beneficial influence on plant growth and iron is necessary in the formation of chlorophyll.

Nitrogen is the "top growth" element needed for leafy vegetables such as spinach, kale, parsley, etc. Aside from mixed fertilizers, nitrogen can be had in various organic forms as in bone meal, blood meal, tankage, fish meal, cotton seed meal and inorganic forms such as nitrate of soda (tending toward an alkaline reaction), amonium sulphate (tending toward an acid reaction), urea and potassium nitrate. The organic materials are safest to use as they react slowly and do not burn.

Phosphorus is generally the most needed element, as the continued use of manures possessing such a little of it, combined with the fact that most crops are heavy phosphorus feeders, soils worked for a number of years are practically depleted of this element. A real fertile soil is rich in readily available phosphorus. It is the element which promotes growth and vigor, flowers, fruit and seeds. Beans, corn, cucumber, tomatoes, turnips and rutabagas seem to respond to heavy feedings of phosphorus. It is available in mixed fertilizers, superphosphate, bone meal and tankage.

Potash is the root growing element. Asparagus, beets, carrots, celery, cucumbers, lettuce, potatoes and radish all respond to extra potash feeding. Sulphate of potash is best for tobacco, lettuce and leaf crops, while muriate of potash is most beneficial to carrots, potatoes and root crops.

KNOW which elements are needed in your soil

Practical tests with the Sudbury Soil Test Kit will show the acidity of soil and any possible deficiency in nitrogen, phosphorus, and potash. Each kit is accompanied by complete instructions and tables of plant needs.

MODEL D (as illustrated)—Contains enough soil testing solutions to make 20 individual tests. **$2.00.**

CLUB MODEL—Makes 50 individual tests for nitrogen, phosphorus, potash and acidity. Cased in handsome sturdy imitation leather. **$4.75.**

MODEL B—In permanent metal case. Contains sufficient chemical for 60 individual tests for nitrogen, phosphorus, potash and acidity. Case contains test tube rack, extra test tubes, special glass funnels, color charts and a supply of filter paper. **$9.75.**

TESTING FLUID for refill. Specify whether for nitrogen, phosphorus, potash or acidity. **2 oz., 75c; 6 oz., $1.50.**

ACID OR ALKALINE PREFERENCES

(Letters refer to degree of acidity in chart below)

VEGETABLES, GRAINS, GRASSES, ETC.

Alfalfa	A	Leek	B
Asparagus	A	Lettuce	A
Barley	A	Muskmelons	B
Beans	C	Oats	C
Beets	A	Onions	A
Bent Grass	D	Parsley	A
Blue Berries	E	Parsnips	D
Blue Grass	A	Peas	B
Broccoli	B	Peppers	C
Cabbage	A	Plums	D
Carrots	A	Potatoes	D
Cauliflower	A	Pumpkin	D
Celery	A	Radish	B
Chicory	B	Raspberries	B
Corn	B	Red Clover	B
Clover	A	Rhubarb	B
Cowpeas	C	Rye	C
Cranberries	E	Spinach	B
Cucumber	B	Squash	C
Currants	C	Strawberries	C
Eggplant	B	Tobacco	C
Endive	B	Tomato	C
Gooseberry	C	Turnip	C
Grapes	D	Rutabaga	C
Kale	B	Watermelon	B
Laurel	E	Wheat	A

FLOWERS

Azaleas	E	Hydrangea Blue	E
Anemone	B	Hydrangea Pink	C
Aster	B	Iris	B
Begonia	B	Lady Slipper	E
Bleeding Heart	C	Larkspur	B
Bouvardia	C	Lilac	B
Calendula	A	Lily	C
Candy-tuft	B	Lupine	C
Canna	B	Marigold	B
Carnation	B	Mignonette	B
Centaurea	B	Morning Glory	A
Cineraria	A	Myosotia	B
Chrysanthemum	B	Narcissus	B
Clarkia	B	Nasturtium	A
Clematis	A	Orchid	D
Columbine	B	Pansy	B
Cosmos	B	Peony	B
Cyclamen	C	Primula	B
Dahlia	B	Poinsettia	B
Delphinium	C	Petunia	A
Didiscus	B	Phlox	C
Easter Lily	C	Poppy	B
Euphorbia	C	Rhododendron	C
Feverfew	B	Rose	B
Ferns	C	St. Paulia	B
Forget Me Not	A	Salpiglossis	B
Fuschia	B	Scabiosa	B
Gardenia	E	Schizanthus	B
Genista	A	Snapdragon	B
Geranium	A	Stocks	B
Gerbera	A	Swainsonia	A
Gladiolus	B	Sweet Peas	A
Godetia	B	Tulips	B
Heather	D	Violet	B
Heliotrope	A	Westeria	B
Holly	E	Woodbine	B
Hyacinth	B	Yucca	B
		Zinnia	B

4pH	5pH	6pH	6½	7pH	7½	8pH
E	D	C	B	A		

Acid — Neutral — Alkaline

B, C, D and E indicate degrees of acidity from 7 pH, which is neutral, to 4 pH which is extremely acid. "A" indicates a slightly alkaline condition.—(1000 lbs. Hydrated Lime per acre will change a sandy loam from pH 5 to pH 6.)

FERTILIZERS

These recommendations are made by the University of Maryland Agricultural Experiment Station.

Analysis	C. O. D. Price Per Ton	Bag 167 lbs.	CROPS AND SOILS
2-12- 6	$26.10	$2.90	FIELD CORN, WHEAT, RYE, WINTER BARLEY, (200-400) on Piedmont and Mountain Valley soils. For annual legumes on heavy unmanured soils (200-400). ALFALFA at planting time (300-700).
0-14- 6	23.85	2.65	ALFALFA, CLOVERS (200-800), SOYBEANS, COWPEAS (200-300). In rotation, on manured land. CORN and GRASS land (200-400) that is heavily manured. Recommended for legume sods in orchards.
0-12-12	26.46	2.95	SOYBEANS, COWPEAS (200-300), ALFALFA (300-800), and the fall-planted green manure crops (200-400) on the lighter soils.
2- 8-10 or 3- 8-15	26.28 31.19	2.95 3.45	SWEET POTATOES (800-1200), CARROTS, PARSNIPS, TURNIPS and other root crops (400-800).
3-12- 6	27.81	3.10	SWEET CORN (200-500), and TOMATOES (500-1000) for canning on heavy soils and where manure is used. WINTER GRAINS, FIELD CORN (200-500), on light soils. LATE POTATOES (600-1000) on heavy soil. GRASS SOD, COVER CROPS and ORCHARDS.
5-10- 5	29.48	3.30	Cannery PEAS and BEANS on heavy soil or well-manured soil (400-800). SWEET CORN (200-600) for market, early and mid-season STRAWBERRIES (300-600).
4- 8- 8	28.44	3.15	TOMATOES (500-1000) in rotation with field crops on light soils. Late POTATOES (500-1000), ASPARAGUS (400-800).
5- 8-12	32.76	3.65	For vine crops—MELONS and CUCUMBERS on light soils and for TOMATOES on sandy soils (400-1000).
6- 8- 6	30.65	3.40	EARLY POTATOES (2000), ASPARAGUS, LATE STRAWBERRIES, LEAFY VEGETABLES, and other truck crops (400-800). CANNING PEAS on light soils (400-800). Spring application on PASTURES and LAWNS (200-400).
4-12- 4	28.26	3.15	Fall applications on PASTURES, TURF GRASSES (200-400) and HOME LAWN (10-20 lbs. per 1000 square feet).

Ton prices include delivery to farm. If hauled from factory deduct $1.50 per ton.

Figures in parentheses indicate the minimum and maximum rates of fertilizer to be applied per acre. The actual amount recommended is based upon the results of soil tests and management practices. In special cases another recommended analysis may be suggested for crops other than those listed, and single ingredients are recommended where additional supplies are needed.

PURE RAW BONE MEAL (Extra Fine)

An excellent fertilizer, especially recommended for lawns, rose bushes, grape vines, and deep-rooted shrubbery, where it is desired to furnish the plants with a perfectly safe, slow-acting but continuous supply of nourishment. Florists and nurserymen use large quantities of our bone meal very successfully. 10 lbs., 45c; 25 lbs., 85c; 50 lbs., $1.50; 100-lb. bag, $2.75. C. O. D. price per ton, $44.15.

STEAMED BONE MEAL (Bone Flour)

100 lbs., $2.60. C. O. D. price per ton, $40.37.

PULVERIZED SHEEP MANURE

5 lbs., 20c; 10 lbs., 35c; 25 lbs., 75c; 100-lb. bag, $2.25. C. O. D. price per ton, $35.42.

BLOOD MEAL

10c per lb.; 3 lbs., 25c; 25 lbs., $1.50; 100 lbs., $4.00.

COW MANURE

SHREDDED. 5 lbs., 30c; 10 lbs., 50c; 25 lbs., 90c; 50 lbs., $1.50; 100 lbs., $2.65.

HYDRATED LIME

Especially useful for correcting acid condition of soils in gardens and lawns. 10-lb. bag, 20c; 50-lb. bag, 50c. Let us quote ton prices.

LAND PLASTER

100 lb. bag, $1.25. C. O. D. price per ton, $17.10.

GROUND TOBACCO STEMS

A finely ground, organic fertilizer material. An ideal and readily available source of ORGANIC Nitrogen and ORGANIC Potash. Does not burn tender roots. Apply at rate of 5 to 10 pounds per 100 square feet, or 1000 to 2000 pounds per acre for all truck crops, tobacco, fruit, tomatoes, potatoes, etc. Analysis 1¼-0-4½. 10 lbs., 50c; 25 lbs., 90c; 100-lb. bag, $2.50.

ADCO

Is a powder, which, when mixed with almost any non-woody vegetable waste, and kept wet, gradually converts it into manure.

50 pounds of ADCO makes a ton of manure. Equal to stable manure—Odorless. Prices: 150 lbs., $10.50; 25 lbs., $2.00; 7½ lbs., 85c.

FOR SOIL IMPROVEMENT

	Lb.	10 lbs.	25 lbs.	100 lbs.
Aluminum Sulphate	$ .10	$ .50	$1.00	$3.25
Asparagus Salt		.20	.40	1.15
Cotton Seed Meal		.50	1.00	2.75
Epsom Salts	.10	.65	1.25	4.50
Kainit (20%)	.05	.45	.85	2.00
Muriate of Potash	.10	.50	1.00	3.00
Nitrate of Soda	.05	.35	.75	2.35
Sulphate of Ammonia	.10	.40	.75	2.50
Sulphate of Potash	.10	.50	1.00	3.25
Super Phosphate (20%)	.10	.40	.65	1.35
Tankage		.50	1.00	3.00
Top Soil (500 lbs. $3.00)		.20	.35	.75
Wood Ashes		.50	1.00	2.50

Let us quote special prices on quantities.

PLANTABBS

Containing Vitamin B-1

30 Tablets, 25c; 75 Tablets, 50c; 200 Tablets, $1.00; 1000 Tablets, $3.50. (By mail add 10%.)

INOCULATE ALL LEGUME SEEDS WITH

NITRAGIN

OVER FORTY YEARS OF SERVICE

When ordering, Always state name of seed.

ALFALFA, all Clovers

Size	Retail
½ bu. each	$ .30
1 bu. each	.50
2½ bu. each	1.00

PEAS (All Varieties)
VETCHES (All Varieties)

½ bu. each	$ .25
1 bu. each	.40
1⅔ bu. each	.60
5 bu. each	1.70
12½ bu. each	4.00

BEANS
String, Wax, Kidney

½ bu. each	$ .25
1 bu. each	.40
5 bu. each	1.70

LESPEDEZA

Size	Retail
1 bu. each	$ .30
2 bu. each	.50
5 bu. each	1.00

SOYBEANS, LIMA BEANS, COW PEAS, PEANUTS

1 bu. each	$ .30
2 bu. each	.50
5 bu. each	1.00
10 bu. each	1.40
25 bu. each	2.90

GARDEN SIZE
Garden Peas & Beans
Sweet Peas & Lupines
Enough for 6 lbs. seed
Retail Price 10c each

Hyper-Humus

Mr. W. E. Hartman of the National Academy of Sciences says: "I believe that Hyper-Humus is responsible for the general excellence of both lawn and plantings." For many years the U. S. Government has used Hyper-Humus in the landscaping and planting of many of its Public Buildings, Post Offices, and Parks. It meets the Government's standard for landscaping, and is approved for Government plantings in Washington and throughout the East.

Humus makes rich loamy garden soil out of common dirt. Added in sufficient quantity it will give the soil the proper texture, help hold the right amount of moisture, and retain plant foods for natural plant stimulation.

FIVE HYPER-HUMUS VALUES

1 Hyper-Humus is literally a workshop for bacterial conversion. The millions of beneficial bacteria in Hyper-Humus gives life and fertility to your soil.

2 Hyper-Humus is a storage-house of soil organics . . . plant food awaiting plant call.

3 Hyper-Humus is a reservoir of normal moisture, assisting food conversion, and coming to the aid of your plants when they need it.

4 Hyper-Humus is a regulator of temperature and air . . . so vital to plant life.

5 Hyper-Humus has perfect friability . . . it is easy and pleasant to use; absolutely free from odor and from weed-seeds.

AMOUNT TO APPLY PER SQUARE FOOT:
NEW LAWNS, 1 to 3 lbs.: OLD LAWNS, 1 to 2 lbs. GARDENS AND FLOWER BEDS, 2 to 4 lbs.

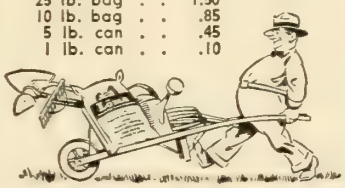
10 lbs., 40c; 25 lbs., 75c; 100 lbs., $1.75; 500 lbs., $6.50; 1000 lbs., $11.50; ton, $20.00. Let us quote 5 ton and carload lots.

NOTE: It is suggested that you add 1 pound of an approved non-toxic plant food to every 10 pounds of Hyper-Humus.

Lōma

A balanced ration of all the Elements science has discovered plants must have to thrive. Clean, odorless, easy to handle. 100% effective. The best thing *on earth* for lawns and gardens.

100 lb. bag	$4.00
50 lb. bag	2.50
25 lb. bag	1.50
10 lb. bag	.85
5 lb. can	.45
1 lb. can	.10

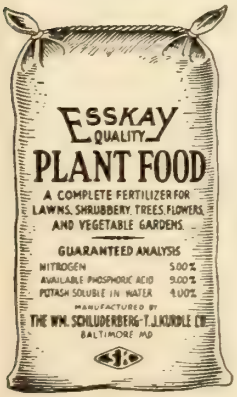


AMERICA'S FINEST PLANT FOOD

EGYPTIAN GROWER

A genuine guano, rich in organic matter. A natural plant food and soil builder. Egyptian Grower is a poultry manure. thoroughly aged and cured before being ground.
Analysis: 2.70—1.60—1.28. Price, 2 lbs., 25c; 25 lbs., $1.00; 50 lbs., $1.75; 100 lbs., $3.00.

ESSKAY QUALITY PLANTFOOD



(Analysis: 5-9-4)

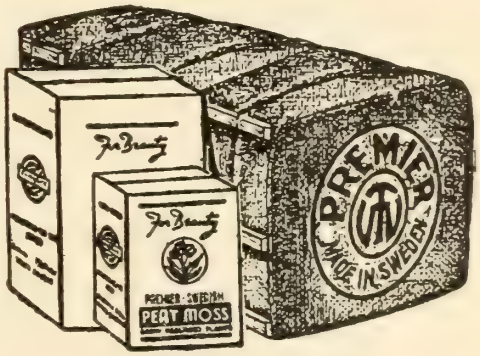
A complete organic fertilizer consisting of blood, bone meal, tankage and potash scientifically blended for Flowers, Lawns, Vegetables, Trees and Shrubs. It builds up the soil and leaves no acid residue.

100-lb. bag	$3.50
50-lb. bag	2.35
25-lb. bag	1.50
10-lb. bag	.75
2-lb. bag	.25

PEAT MOSS

Promotes Growth by Improving Texture of Soils and Regulating Supply of Moisture

Investigate its Many Advantages



Granulated Peat Moss has rapidly come into general use for horticultural purposes, and large commercial growers recommend it highly as a moisture retaining humus, unsurpassed for mulching. It is excellent for clayey, light, sandy or gravelly soils, beds, hotbeds, coldframes, greenhouse benches, in potting soil and as a winter protection for lawns. Also as a mulch on strawberry, perrenial beds, roses, rhododendrons, azaleas, evergreens, ferns, etc.

Junior Bale, 10 bushels.....$2.15

Large Bale, 22 bushels..... 3.50

3 qts., 10c; 1½ pks., 30c; 1 bu., 60c
3 bu., $1.15

Special Prices on Larger Quantities

Science discovered that plants require eleven different food elements from the soil. Failure to supply some of these elements is the greatest cause of gardening failure. To be sure of gardening success, feed everything you grow with

VIGORO

Complete plant food

Vigoro Is a Product of Swift

100-lb. bag	$4.00	10-lb. pkg.	$ .85
50-lb. bag	2.50	5-lb. pkg.	.45
25-lb. bag	1.50	1-lb. pkg.	.10

F. O. B. Baltimore

ROOTONE

PATENTS PENDING

Not Treated **Treated**

The New Hormone Powder for dusting seeds, cuttings and bulbs. Requires no solutions nor soaking and is easy to use. Assures better germination of seeds, produces better plants with longer roots, greater top growth and vigor. Rootone kills fungi and prevents dampening off.

It offers the most practical, economical, simplified and efficient way for applying hormone root forming chemicals.

2-oz. size, will treat 3 bu. seed or 3000 cuttings, **$1.00.**

1 lb., will treat 30 bu. seed or 30,000 cuttings, **$5.00.**

VITAMIN B-1

(Thiamin Chloride)

Pure Crystalline Powdered Form

Amazing results are being achieved by amateur and professional growers through the use of this growth producing vitamin which causes plant life to gain the greatest possible benefit from the soil. Not a plant food or fertilizer, but a root re-invigorator which materially speeds growth, produces earlier, larger and healthier plant species.

1 milligram (a quantity equal in volume to the head of a small pin) dissolved in 20 drops of water is a basic solution. This is further diluted at the rate of 1 drop to 1 gallon of water for the ordinary minimum concentration. For some varieties stronger concentrations up to a maximum of 20 drops in 1 quart of water have produced best results. 1/10 gram vial makes up to 2000 gallons, **$1.00**; 1 gram commercial size, **$6.50.**

TRANSPLANTONE

Contains Vitamin B-1 and other parts of the Vitamin B fraction, plus plant Hormones which are active in root formation.

This Vitamin-Hormone tonic stimulates the growth of seedlings, plants, trees, shrubs, rose bushes, lawns, etc., by not only forming new roots but by also continuing their growth and making plant food more available. Very beneficial to transplanted seedlings, shaded lawns and backward garden plants. 1 ounce makes 900 gallons watering solution. **Oz., 50c; 3 oz., $1.00; lb., $4.00.**

HYPONEX Chemical Plant Food

For growing plants in soil, sand or water. Ideal for "tank farming," a complete and balanced plant food; odorless and keeps indefinitely.

3 oz., makes 18 gal., 40c; 1 lb., makes 100 gal., $1.00

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Prolongs life of cut flowers, retards wilting, prevents fading, maintains fragrance. Used by practical florists since 1933.

10c size, complete form, nothing to add, ready for instant use, sufficient for 1 qt. of water. 20c size, with addition of 10 oz. of sugar makes 10 qts. of solution.

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Size at top 12x21 inches, and 10 inches deep. Capacity about 2½ pecks. Weight 25 pounds. No. 500 .....$6.85

E-Z — Cheap but practical — 85c ea.

Model	Size	Price
B	14 in.	$3.00
Junior	16 in.	6.30
Standard	24 in.	11.95
Special	36 in.	19.45

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1 lb.	**$ .50**	**25 lbs.**	**$11.25**
5 lbs.	**2.35**	**100 lbs.**	**42.50**

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A mixture of turf varieties particularly adaptable for growing in sandy soils.

1 lb.	**$ .60**	**25 lbs.**	**$13.75**
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5 lbs.	**2.85**	**100 lbs.**	**52.50**

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A good, clean mixture of high germinating stock, of low weed content. Not as permanent as our Superior mixture, but well worth the price.

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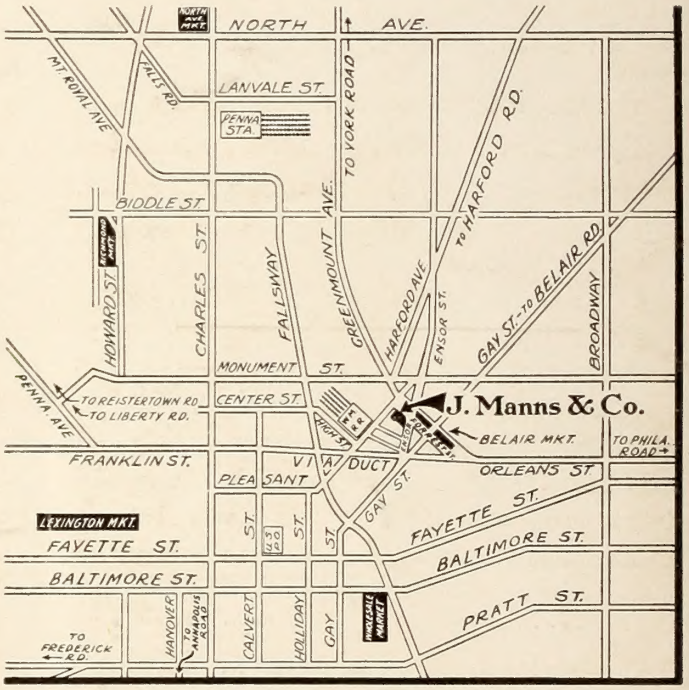

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